

SICHERHEITSDATENBLATT

Gemäss Verordnung (EG) Nr. 1907/2006, wie geändert durch Verordnung (EU) Nr. 2015/830

MEGACLEAN

ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

1.1. Produktidentifikator

Produktname : MEGACLEAN
Registrierungsnummer REACH : 01-2119457290-43-0000
Produkttyp REACH : Stoff/mono-constituent
CAS-Nummer : 78-93-3
EG-Indexnummer : 606-002-00-3
EG-Nummer : 201-159-0
Molekularmasse : 72.11 g/mol
Bruttoformel : C4H8O

1.2. Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird

1.2.1 Relevante identifizierte Verwendungen

Titel Expositionsszenario	Gruppe Expositionsszenarium	Verwendungssektor	Verwendungsdeskriptoren (PROC oder PC)	Verwendungsdeskriptoren (ERC)
ES01 Herstellung des Stoffes	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 1
	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 4
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 1
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 4
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 1
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 4
ES02 Verwendung als Zwischenprodukt	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 6a
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 6a
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 6a
ES03 Verteilung des Stoffes	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 1
	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 2
	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 3
	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 4
	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 5
	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 6a
	Industriell	SU 3	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 7
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 1
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 2
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 3
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 4
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 5

Hergestellt von: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)
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<http://www.big.be>
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Überarbeitungsgrund: 2; 3; 5; 16
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ES03 Verteilung des Stoffes	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 6a
	Industriell	SU 8	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 7
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 1
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 2
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 3
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 4
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 5
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 6a
	Industriell	SU 9	PROC 1, PROC 15, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9	ERC 7
ES04 Formulierung & (Wieder)verpacken von Stoffen und Gemischen	Industriell	SU 10	PROC 1, PROC 14, PROC 15, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 9	ERC 2
	Industriell	SU 3	PROC 1, PROC 14, PROC 15, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 9	ERC 2
ES05 Verwendung in Beschichtungen	Industriell	SU 3	PROC 1, PROC 10, PROC 13, PROC 15, PROC 2, PROC 3, PROC 4, PROC 5, PROC 7, PROC 8a, PROC 8b	ERC 4
ES06 Verwendung in Beschichtungen	Gewerblich	SU 22	PROC 1, PROC 10, PROC 11, PROC 13, PROC 15, PROC 19, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b	ERC 8a
	Gewerblich	SU 22	PROC 1, PROC 10, PROC 11, PROC 13, PROC 15, PROC 19, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b	ERC 8d
ES07 Verwendung in Reinigungsmitteln	Industriell	SU 3	PROC 1, PROC 10, PROC 13, PROC 2, PROC 3, PROC 4, PROC 7, PROC 8a, PROC 8b	ERC 4
ES08 Verwendung in Reinigungsmitteln	Gewerblich	SU 22	PROC 1, PROC 10, PROC 11, PROC 13, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 8a
	Gewerblich	SU 22	PROC 1, PROC 10, PROC 11, PROC 13, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b	ERC 8b
ES09 Schmiermittel	Industriell	SU 3	PROC 1, PROC 10, PROC 13, PROC 17, PROC 18, PROC 2, PROC 3, PROC 4, PROC 7, PROC 8a, PROC 8b, PROC 9	ERC 4
	Industriell	SU 3	PROC 1, PROC 10, PROC 13, PROC 17, PROC 18, PROC 2, PROC 3, PROC 4, PROC 7, PROC 8a, PROC 8b, PROC 9	ERC 7
ES10 Kühlschmierstoffe/Walzöle	Industriell	SU 3	PROC 1, PROC 10, PROC 13, PROC 17, PROC 2, PROC 3, PROC 4, PROC 5, PROC 7, PROC 8a, PROC 8b, PROC 9	ERC 4
ES11 Verwendung in Agrochemikalien	Gewerblich	SU 22	PROC 1, PROC 11, PROC 13, PROC 2, PROC 4, PROC 8a, PROC 8b	ERC 8a
	Gewerblich	SU 22	PROC 1, PROC 11, PROC 13, PROC 2, PROC 4, PROC 8a, PROC 8b	ERC 8d
ES12 Verwendung als Kraftstoff	Industriell	SU 3	PROC 1, PROC 16, PROC 2, PROC 3, PROC 8a, PROC 8b	ERC 7
ES13 Verwendung als Kraftstoff	Gewerblich	SU 22	PROC 1, PROC 16, PROC 2, PROC 3, PROC 8a, PROC 8b	ERC 9a
	Gewerblich	SU 22	PROC 1, PROC 16, PROC 2, PROC 3, PROC 8a, PROC 8b	ERC 9b
ES14 Verwendung in Labors	Industriell	SU 3	PROC 10, PROC 15	ERC 2
	Industriell	SU 3	PROC 10, PROC 15	ERC 4
ES15 Verwendung in Labors	Gewerblich	SU 22	PROC 10, PROC 15	ERC 8a
ES16 Verwendung in Beschichtungen	Verbraucher	SU 21	PC 1, PC 15, PC 18, PC 23, PC 24, PC 31, PC 34, PC 4, PC 8, PC 9a, PC 9b	ERC 8a
	Verbraucher	SU 21	PC 1, PC 15, PC 18, PC 23, PC 24, PC 31, PC 34, PC 4, PC 8, PC 9a, PC 9b	ERC 8d

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ES17 Verwendung in Reinigungsmitteln	Verbraucher	SU 21	PC 24, PC 35, PC 9a, PC 9b	ERC 8a
	Verbraucher	SU 21	PC 24, PC 35, PC 9a, PC 9b	ERC 8d
ES18 Schmiermittel	Verbraucher	SU 21	PC 1, PC 24, PC 31	ERC 8a
	Verbraucher	SU 21	PC 1, PC 24, PC 31	ERC 8d
	Verbraucher	SU 21	PC 1, PC 24, PC 31	ERC 9a
	Verbraucher	SU 21	PC 1, PC 24, PC 31	ERC 9b
ES19 Verwendung in Agrochemikalien	Verbraucher	SU 21	PC 12, PC 27	ERC 8a
	Verbraucher	SU 21	PC 12, PC 27	ERC 8d
ES20 Verwendung als Kraftstoff	Verbraucher	SU 21	PC 13	ERC 9a
	Verbraucher	SU 21	PC 13	ERC 9b

1.2.2 Verwendungen, von denen abgeraten wird

Gruppe	Verwendungen, von denen abgeraten wird	Verwendungsdeskriptoren (PC)	Umweltfrei- stzungskatego- rie (ERC)	Erzeugnis (AC)
	Keine Verwendungen, von denen abgeraten wird			

1.3. Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt

Lieferant des Sicherheitsdatenblattes

Vertrieb in Österreich
TECH-MASTERS Austria GmbH
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 Tel +43 7733 20090 | Fax +43 7733 20092
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Notrufnummer
 01 406 43 43

Hersteller des Produktes

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 Industrielaan 5B
 B-2250 Olen
 ☎ +32 14 85 97 37
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1.4. Notrufnummer

24 Std/24 Std (Telefonische Beratung: Englisch, Französisch, Deutsch, Niederländisch):
 +32 14 58 45 45 (BIG)

ABSCHNITT 2: Mögliche Gefahren

2.1. Einstufung des Stoffs oder Gemischs

Nach den Kriterien der Verordnung (EG) Nr. 1272/2008 als gefährlich eingestuft

Klasse	Kategorie	Gefahrenhinweise
Flam. Liq.	Kategorie 2	H225: Flüssigkeit und Dampf leicht entzündbar.
Eye Irrit.	Kategorie 2	H319: Verursacht schwere Augenreizung.
STOT SE	Kategorie 3	H336: Kann Schläfrigkeit und Benommenheit verursachen.

2.2. Kennzeichnungselemente



Signalwort

H-Sätze

H225 Flüssigkeit und Dampf leicht entzündbar.
 H319 Verursacht schwere Augenreizung.
 H336 Kann Schläfrigkeit und Benommenheit verursachen.

P-Sätze

P210 Von Hitze, heißen Oberflächen, Funken, offenen Flammen sowie anderen Zündquellenarten fernhalten. Nicht rauchen.



Gefahr

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P280	Schutzhandschuhe und Augenschutz/Gesichtsschutz tragen.
P304 + P340	BEI EINATMEN: Die Person an die frische Luft bringen und für ungehinderte Atmung sorgen.
P303 + P361 + P353	BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen oder duschen.
P305 + P351 + P338	BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.
P403 + P233	An einem gut belüfteten Ort aufbewahren. Behälter dicht verschlossen halten.

Ergänzenden Informationen

EUH066	Wiederholter Kontakt kann zu spröder oder rissiger Haut führen.
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2.3. Sonstige Gefahren

Gas/Dampf breitet sich am Boden aus: Zündgefahr

Achtung! Der Stoff wird über die Haut resorbiert

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

3.1. Stoffe

Name REACH Registrierungsnummer	CAS-Nr. EG-Nr.	Konz. (C)	Einstufung gemäß CLP	Fußnote	Bemerkung
Butanon 01-2119457290-43	78-93-3 201-159-0	C>99%	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(2)(10)	Mono-constituent

(1) Zu vollständigem Wortlaut der H-Sätze: siehe Punkt 16

(2) Stoff, für den ein gemeinschaftlicher Grenzwert für die Exposition am Arbeitsplatz gilt

(10) Unterliegt den Beschränkungen in Anhang XVII der Verordnung (EG) Nr. 1907/2006

3.2. Gemische

Nicht anwendbar

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

4.1. Beschreibung der Erste-Hilfe-Maßnahmen

Allgemeine Maßnahmen:

Die Lebensfunktionen überwachen. Bewusstloses Opfer: Atemwege freihalten. Bei Atemstillstand: künstliche Beatmung/Sauerstoffzugabe. Bei Herzstillstand: Wiederbelebung durchführen. Bei Bewusstsein mit Atemschwierigkeiten: halbsitzende Lage. Bei Schock ist empfohlen: Körper flach, Beine hochgelagert. Bei Erbrechen: Erstickung/Aspirationspneumonie verhindern. Vor Wärmeverlust schützen (zudecken, nicht aufwärmen). Das Opfer ständig beobachten. Psychologische Betreuung leisten. Opfer ruhig halten, jede Anstrengung vermeiden. Je nach dem Zustand: zum Arzt/Krankenhaus.

Nach Einatmen:

Opfer an die frische Luft bringen. Atemschwierigkeiten: Arzt/medizinischen Dienst konsultieren.

Nach Hautkontakt:

Sofort mit viel Wasser spülen. Verwendung von Seife ist erlaubt. Keine (chemischen) Neutralisationsmittel verwenden. Bei andauernder Reizung einen Arzt konsultieren.

Nach Augenkontakt:

Sofort mit viel Wasser spülen. Eventuell Vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter ausspülen. Keine Neutralisationsmittel verwenden. Bei andauernder Reizung einen Augenarzt konsultieren.

Nach Verschlucken:

Mund mit Wasser spülen. Frühestmöglich nach Einnahme: viel Wasser trinken lassen. Kein Erbrechen herbeiführen. Medizinalkohle zugeben. Bei Unwohlsein: Arzt/medizinischen Dienst konsultieren.

4.2. Wichtigste akute und verzögert auftretende Symptome und Wirkungen

4.2.1 Akute Symptome

Nach Einatmen:

Reizung der Nasenschleimhäute. Übelkeit. Kopfschmerzen. EXPOSITION AN HOHEN KONZENTRATIONEN: Reizung der Atemwege. ZNS-Depression. Schwindel. Verwirrtheit. Rausch. Bewusstseinsstörungen.

Nach Hautkontakt:

Rote Hautfarbe. NACH LANGFRISTIGER EXPOSITION/KONTAKT: Trockene Haut. Rissige Haut.

Nach Augenkontakt:

Reizung des Augengewebes. Entzündung/Schädigung des Augengewebes.

Nach Verschlucken:

NACH MASSIVER EINNAHME: Ähnliche Symptome wie beim Einatmen. Aspirationspneumonie möglich.

4.2.2 Verzögert auftretende Symptome

Keine Wirkungen bekannt.

4.3. Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Wenn anwendbar und vorhanden, ist das unten angegeben.

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ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

5.1. Löschmittel

5.1.1 Geeignete Löschmittel

Kleiner Brand: Schnell wirkendes ABC-Löschpulver, Schnell wirkendes BC-Löschpulver, Schnell wirkender Schaumlöcher der Brandklasse B, Schnell wirkendes CO₂-Löschpulver.

Großer Brand: Brandklasse B Schaum (alkoholbeständig), Wassernebel, wenn sich Lache nicht ausbreiten kann.

5.1.2 Gefährliche Löschmittel

Kleiner Brand: Wasser (schnell wirkender Feuerlöscher, Rolle); Gefahr einer Ausbreitung der Lache.

Großer Brand: Wasser; Gefahr einer Ausbreitung der Lache.

5.2. Besondere vom Stoff oder Gemisch ausgehende Gefahren

Bei Verbrennung werden CO und CO₂ gebildet. Bei Erhitzung: Peroxidbildung mit erhöhter Brand-/Explosionsgefahr.

5.3. Hinweise für die Brandbekämpfung

5.3.1 Maßnahmen:

Geschlossene Behälter mit Wasser kühlen, falls sie dem Feuer ausgesetzt sind. Hitzegefährdete Ladung nicht versetzen.

5.3.2 Besondere Schutzausrüstungen für die Brandbekämpfung:

Handschuhe. Dichtschließende Schutzbrille. Schutzanzug. Bei Erhitzung/Verbrennung: Pressluft-/Sauerstoffgerät.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

6.1. Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren

Motore abstellen und nicht rauchen. Kein offenes Feuer und keine Funken. Funkenfreie und explosionsgeschützte Geräte und Leuchten.

6.1.1 Schutzausrüstungen für nicht für Notfälle geschultes Personal

Siehe Punkt 8.2

6.1.2 Schutzausrüstungen für Einsatzkräfte

Handschuhe. Dichtschließende Schutzbrille. Schutzanzug.

Geeignete Schutzkleidung

Siehe Punkt 8.2

6.2. Umweltschutzmaßnahmen

Freiwerdendes Produkt aufsammeln. Ausgelaufene Flüssigkeit eindämmen. Wenn möglich Verdunstung einschränken. Eindringen in Kanalisationen verhindern.

6.3. Methoden und Material für Rückhaltung und Reinigung

Flüssigkeit mit nichtbrennbarem Material absorbieren z.B.: Kieselgur, Kalksteinpulver oder trockenem Sand/Vermikulit/trockener Erde. Absorbiertes Produkt in verschließbaren Behältern sammeln. Verschütteter Feststoff/Reste sorgfältig sammeln. Verschmutzte Flächen reichlich mit Wasser reinigen. Sammelgut an Hersteller/zuständige Stelle abgeben. Nach der Arbeit Kleidung und Ausrüstung reinigen.

6.4. Verweis auf andere Abschnitte

Siehe Punkt 13.

ABSCHNITT 7: Handhabung und Lagerung

Die in diesem Abschnitt enthaltenen Informationen sind eine allgemeine Beschreibung. Wenn anwendbar und vorhanden, sind die Expositionsszenarien aufgenommen in dem Anhang. Sie müssen immer zum Thema gehörende Expositionsszenarien gebrauchen welche ihren identifizierten Verwendungen entsprechen.

7.1. Schutzmaßnahmen zur sicheren Handhabung

Von offenen Flammen/Wärmequellen fernhalten. Bei unzureichender Lüftung: offene Flammen/Funken vermeiden. Bei unzureichender Lüftung: funkenfreie/explosionsgeschützte Geräte/Leuchten. Bei unzureichender Lüftung: maßnahmen gegen elektrostatische Aufladungen treffen. Gas/Dampf schwerer als Luft bei 20°C. Übliche Hygiene befolgen. Behälter gut geschlossen halten. Verschmutzte Kleidung sofort ausziehen. Abfälle nicht in den Ausguss schütten.

7.2. Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten

7.2.1 Bedingungen für eine sichere Lagerung:

Lagerungstemperatur: < 30 °C. An einem kühlen Ort aufbewahren. Vor direkter Sonneneinstrahlung schützen. Vor Licht schützen. Raumentlüftung am Boden. Feuerfester Lagerraum. Unter Verschluss aufbewahren. Mit automatischer Feuerlöschanlage ausgestattet. Kann unter Inertgas gelagert werden. Den gesetzlichen Vorschriften entsprechen.

7.2.2 Fernhalten von:

Wärmequellen, Zündquellen, Oxidationsmitteln, (starken) Säuren, (starken) Basen, Halogenen, Alkoholen, Aminen.

7.2.3 Geeignetes Verpackungsmaterial:

Rostfreier Stahl, Monelstahl, Kohlenstoffstahl.

7.2.4 Ungeeignetes Verpackungsmaterial:

Synthetisches Material, Aluminium, Kupfer.

7.3. Spezifische Endanwendungen

Wenn anwendbar und vorhanden, sind die Expositionsszenarien aufgenommen in dem Anhang. Hinweise des Herstellers beachten.

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ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

8.1. Zu überwachende Parameter

8.1.1 Exposition am Arbeitsplatz

a) Grenzwerte für die berufsbedingte Exposition

Die Grenzwerte werden unten aufgeführt, soweit diese verfügbar und anwendbar sind.

EU

Butanon	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (Arbeitsplatz-Richtgrenzwert)	200 ppm
	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (Arbeitsplatz-Richtgrenzwert)	600 mg/m ³
	Kurzzeitwert (Arbeitsplatz-Richtgrenzwert)	300 ppm
	Kurzzeitwert (Arbeitsplatz-Richtgrenzwert)	900 mg/m ³

Belgien

2-Butanone	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h	200 ppm
	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h	600 mg/m ³
	Kurzzeitwert	300 ppm
	Kurzzeitwert	900 mg/m ³

die Niederlande

2-Butanon	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (Öffentlicher Arbeitsplatz-Richtgrenzwert)	197 ppm
	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (Öffentlicher Arbeitsplatz-Richtgrenzwert)	590 mg/m ³
	Kurzzeitwert (Öffentlicher Arbeitsplatz-Richtgrenzwert)	300 ppm
	Kurzzeitwert (Öffentlicher Arbeitsplatz-Richtgrenzwert)	900 mg/m ³

Frankreich

Méthyléthylcétone	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (VRC: Valeur réglementaire contraignante)	200 ppm
	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (VRC: Valeur réglementaire contraignante)	600 mg/m ³
	Kurzzeitwert (VRC: Valeur réglementaire contraignante)	300 ppm
	Kurzzeitwert (VRC: Valeur réglementaire contraignante)	900 mg/m ³

Deutschland

Butanon	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (TRGS 900)	200 ppm
	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (TRGS 900)	600 mg/m ³

UK

Butan-2-one (methyl ethyl ketone)	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (Workplace exposure limit (EH40/2005))	200 ppm
	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (Workplace exposure limit (EH40/2005))	600 mg/m ³
	Kurzzeitwert (Workplace exposure limit (EH40/2005))	300 ppm
	Kurzzeitwert (Workplace exposure limit (EH40/2005))	899 mg/m ³

USA (TLV-ACGIH)

Methyl ethyl ketone (MEK)	Zeitlich gewichteter durchschnittlicher Expositionsgrenzwert 8 h (TLV - Adopted Value)	200 ppm
	Kurzzeitwert (TLV - Adopted Value)	300 ppm

b) Nationale biologische Grenzwerte

Die Grenzwerte werden unten aufgeführt, soweit diese verfügbar und anwendbar sind.

Deutschland

Butanon (2-Butanon; Ethylmethylketon) (Butanon (2-Butanon))	Urin: expositionsende, bzw. schichtende	2 mg/l	05/2015 DFG
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UK

Butan-2-one (butan-2-one)	Urine: post shift	70 µmol/L	
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USA (BEI-ACGIH)

Methyl ethyl ketone (MEK)	urine: end of shift	2 mg/L	
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8.1.2 Verfahren zur Probenahme

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Arbeitsstoff	Test	Nummer
2-Butanone (MEK) (Methyl ethyl ketone)	NIOSH	2500
2-Butanone (Methyl ethyl ketone)	OSHA	84
2-Butanone (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
2-Butanone (Volatile Organic compounds)	NIOSH	2549
2-Butanone	OSHA	1004
2-Butanone	OSHA	13
ACETONE and METHYL ETHYL KETONE in urine	NIOSH	8319
MEK	NIOSH	8002
Methyl Ethyl Ketone (ketones I)	NIOSH	2555
Methyl Ethyl Ketone	OSHA	16

8.1.3 Anwendbare Grenzwerte bei der vorgesehenen Verwendung

Die Grenzwerte werden unten aufgeführt, soweit diese verfügbar und anwendbar sind.

8.1.4 DNEL/PNEC-Werte

DNEL/DMEL - Arbeitnehmer

MEGACLEAN

Schwellenwert (DNEL/DMEL)	Typ	Wert	Bemerkung
DNEL	Systemische Langzeitwirkungen, dermal	1161 mg/kg bw/Tag	
	Systemische Langzeitwirkungen, Inhalation	600 mg/m ³	

DNEL/DMEL - Allgemeinbevölkerung

MEGACLEAN

Schwellenwert (DNEL/DMEL)	Typ	Wert	Bemerkung
DNEL	Systemische Langzeitwirkungen, dermal	412 mg/kg bw/Tag	
	Systemische Langzeitwirkungen, Inhalation	106 mg/m ³	
	Systemische Langzeitwirkungen, oral	31 mg/kg bw/Tag	

PNEC

MEGACLEAN

Medien	Wert	Bemerkung
Süßwasser	55.8 mg/l	
Süßwassersediment	284.7 mg/kg	
Wasser (intermittierende Freisetzung)	55.8 mg/l	
Meerwassersediment	284.7 mg/kg	
Meerwasser	55.8 mg/l	
STP	709 mg/l	
Boden	22.5 mg/kg	

8.1.5 Control banding

Wenn anwendbar und vorhanden, ist das unten angegeben.

8.2. Begrenzung und Überwachung der Exposition

Die in diesem Abschnitt enthaltenen Informationen sind eine allgemeine Beschreibung. Wenn anwendbar und vorhanden, sind die Expositionsszenarien aufgenommen in dem Anhang. Sie müssen immer zum Thema gehörende Expositionsszenarien gebrauchen welche ihren identifizierten Verwendungen entsprechen.

8.2.1 Geeignete technische Steuerungseinrichtungen

Von offenen Flammen/Wärmequellen fernhalten. Bei unzureichender Lüftung: offene Flammen/Funken vermeiden. Bei unzureichender Lüftung: funkenfreie/explosionssgeschützte Geräte/Leuchten. Bei unzureichender Lüftung: maßnahmen gegen elektrostatische Aufladungen treffen. Vor Gebrauch anwesende Peroxide aufspüren/vernichten. Regelmäßige Konzentrationsmessungen in der Luft vornehmen. Unter örtlicher Absaugung/Lüftung arbeiten.

8.2.2 Individuelle Schutzmaßnahmen, zum Beispiel persönliche Schutzausrüstung

Übliche Hygiene befolgen. Behälter gut geschlossen halten. Bei der Arbeit nicht essen, trinken, rauchen.

a) Atemschutz:

Gasmaske mit Filtertyp A bei Konz. in der Luft > Expositionsgrenzwert.

b) Handschutz:

Handschuhe.

Materialauswahl	Durchbruchzeit	Dicke
Butylkautschuk	> 60 Minuten	>=0.5 mm

- Materialauswahl (guter Schutz)

Butylkautschuk.

- Materialauswahl (mangelhafter Schutz)

Naturkautschuk, Neopren, Nitrilkautschuk, Polyethylen, Viton, PVC.

c) Augenschutz:

Dichtschließende Schutzbrille.

d) Hautschutz:

Schutzkleidung. Kopf-/Nackenschutz.

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8.2.3 Begrenzung und Überwachung der Umweltexposition:

Siehe Punkt 6.2, 6.3 und 13

ABSCHNITT 9: Physikalische und chemische Eigenschaften

9.1. Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

Erscheinungsform	Flüssigkeit
Geruch	Charakteristischer Geruch
Geruchsschwelle	2 - 85 ppm 6 - 251 mg/m ³
Farbe	Farblos
Partikelgröße	Nicht anwendbar (Feststoff)
Explosionsgrenzen	1.8 - 11.5 Vol % 50 - 350 g/m ³
Entzündbarkeit	Leichtentzündlich
Log Kow	0.3 ; Experimenteller Wert ; OECD 117 ; 40 °C
Dynamische Viskosität	0.0004 Pa.s ; 15 °C
Kinematische Viskosität	0.51 mm ² /s ; 20 °C
Schmelzpunkt	-86 °C
Siedepunkt	80 °C
Flammpunkt	-6 °C
Verdampfungsgeschwindigkeit	2.7 ; Ether 6 ; Butylacetat
Relative Dampfdichte	2.4
Dampfdruck	105 hPa ; 20 °C 370 hPa ; 50 °C
Löslichkeit	Wasser ; 28 g/100 ml ; 20 °C Ethanol ; vollständig Aceton ; vollständig Ether ; vollständig
Relative Dichte	0.80 - 0.81 ; 20 °C
Zersetzungstemperatur	Keine daten vorhanden
Selbstentzündungstemperatur	404 °C - 515 °C
Explosionsgefahr	Keine chemische Gruppe, die mit explosiven Eigenschaften in Verbindung gebracht wird
Oxidierende Eigenschaften	Keine chemische Gruppe, die mit oxidierenden Eigenschaften in Verbindung gebracht wird
pH	Keine daten vorhanden

9.2. Sonstige Angaben

Minimale Zündenergie	0.5 mJ
Spezifische Leitfähigkeit	1E7 pS/m ; 25 °C
Kritische Temperatur	263 °C
Kritischer Druck	41550 hPa
Oberflächenspannung	0.024 N/m ; 20 °C
Relative Dichte Sattdampf/Luftgemisch	1.2
Sättigungskonzentration	311 g/m ³
Absolute Dichte	804 kg/m ³ - 807 kg/m ³ ; 20 °C

ABSCHNITT 10: Stabilität und Reaktivität

10.1. Reaktivität

Mögliche Entzündung durch Funken. Gas/Dampf breitet sich am Boden aus: Zündgefahr.

10.2. Chemische Stabilität

Stabil unter Normalbedingungen.

10.3. Möglichkeit gefährlicher Reaktionen

Reagiert heftig mit (starken) Oxidationsmitteln: (erhöhte) Brand-/Explosionsgefahr. Reagiert heftig bis explosiv mit vielen Verbindungen, z.B.: mit (manchen) Halogenverbindungen, alkoholen und mit (manchen) Säuren/Basen. Bei längerer Lagerzeit: Peroxidbildung mit erhöhter Brand-/Explosionsgefahr.

10.4. Zu vermeidende Bedingungen

Von offenen Flammen/Wärmequellen fernhalten. Bei unzureichender Lüftung: offene Flammen/Funken vermeiden. Bei unzureichender Lüftung: funkenfreie/explosionsgeschützte Geräte/Leuchten. Bei unzureichender Lüftung: maßnahmen gegen elektrostatische Aufladungen treffen.

10.5. Unverträgliche Materialien

Oxidationsmitteln, (starken) Säuren, (starken) Basen, Halogenen, Alkoholen, Aminen.

Überarbeitungsgrund: 2; 3; 5; 16

Datum der Erstellung: 2002-11-06

Datum der Überarbeitung: 2017-05-15

Überarbeitungsnummer: 0701

Produktnummer: 38712

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10.6. Gefährliche Zersetzungsprodukte

Bei Verbrennung werden CO und CO₂ gebildet.

ABSCHNITT 11: Toxikologische Angaben

11.1. Angaben zu toxikologischen Wirkungen

11.1.1 Prüfungsergebnisse

Akute Toxizität

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Expositionsweg	Parameter	Methode	Wert	Expositionszeit	Spezies	Wertbestimmung	Bemerkung
Oral	LD50	Äquivalent mit OECD 423	2054 mg/kg		Ratte (männlich)	Read-across	
Oral	LD50	Äquivalent mit OECD 423	2328 mg/kg		Ratte (weiblich)	Read-across	
Dermal	LD50	Äquivalent mit OECD 402	> 10 ml/kg bw		Kaninchen (männlich)	Experimenteller Wert	
Inhalation	LC50		34 mg/l	4 Std	Ratte	Literaturstudie	
Inhalation	LC50		11300 ppm	4 Std	Ratte	Literaturstudie	

Schlussfolgerung

Nicht für akute Toxizität eingestuft

Ätz-/Reizwirkung

MEGACLEAN

Expositionsweg	Ergebnis	Methode	Expositionszeit	Zeitpunkt	Spezies	Wertbestimmung	Bemerkung
Auge	Reizwirkung	Äquivalent mit OECD 405			Kaninchen	Experimenteller Wert	Einmalige Exposition
Haut	Keine Reizwirkung	OECD 404	4 Std		Kaninchen	Read-across	

Schlussfolgerung

Verursacht schwere Augenreizung.

Reizt die Augen

Nicht als hautreizend eingestuft

Sensibilisierung der Atemwege/Haut

MEGACLEAN

Expositionsweg	Ergebnis	Methode	Expositionszeit	Beobachtungszeitpunkt	Spezies	Wertbestimmung	Bemerkung
Haut	Nicht sensibilisierend	Äquivalent mit OECD 413			Meerschweinchen (weiblich)	Experimenteller Wert	

Schlussfolgerung

Nicht als sensibilisierend für die Haut eingestuft

Spezifische Zielorgan-Toxizität

MEGACLEAN

Expositionsweg	Parameter	Methode	Wert	Organ	Wirkung	Expositionszeit	Spezies	Wertbestimmung
Inhalation (Dämpfe)	NOAEC	Äquivalent mit OECD 413	5041 ppm	Allgemeines	Keine Wirkung	18 Wochen (6Std/Tag, 5	Ratte (männlich/weiblich)	Experimenteller Wert
Inhalation (Dämpfe)				Zentrales Nervensystem	Schläfrigkeit, Benommenheit			Literaturstudie

Schlussfolgerung

Kann Schläfrigkeit und Benommenheit verursachen.

Niedrige subchronische Toxizität über inhalative Aufnahme

Keimzell-Mutagenität (in vitro)

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Ergebnis	Methode	Testsubstrat	Wirkung	Wertbestimmung
Negativ	Äquivalent mit OECD 473	Rattenleberzellen	Keine Wirkung	Experimenteller Wert
Negativ	Äquivalent mit OECD 476	Maus (Lymphomazellen L5178Y)	Keine Wirkung	Experimenteller Wert
Negativ	Äquivalent mit OECD 471	Bacteria (S.typhimurium)	Keine Wirkung	Experimenteller Wert

Keimzell-Mutagenität (in vivo)

Überarbeitungsgrund: 2; 3; 5; 16

Datum der Erstellung: 2002-11-06

Datum der Überarbeitung: 2017-05-15

Überabarbeitungsnummer: 0701

Produktnummer: 38712

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Ergebnis	Methode	Expositionszeit	Testsubstrat	Organ	Wertbestimmung
Negativ	Äquivalent mit OECD 474		Maus (männlich/weiblich)		Experimenteller Wert

Schlussfolgerung

Nicht für mutagene Toxizität oder Gentoxizität eingestuft

Karzinogenität

MEGACLEAN

Keine (experimentellen) Daten vorhanden

Schlussfolgerung

Nicht für Karzinogenität eingestuft

Reproduktionstoxizität

MEGACLEAN

	Parameter	Methode	Wert	Expositionszeit	Spezies	Wirkung	Organ	Wertbestimmung
Entwicklungstoxizität	NOAEC	Äquivalent mit OECD 414	1002 ppm	18 Tage (7Std/Tag)	Ratte	Keine Wirkung	Allgemeines	Experimenteller Wert
	LOAEC	Äquivalent mit OECD 414	3000 ppm	18 Tage (7Std/Tag)	Ratte	Gewichtsreduktion	Allgemeines	Experimenteller Wert
	LOAEC	Äquivalent mit OECD 414	3000 ppm	18 Tage (7Std/Tag)	Ratte		Skelett	Experimenteller Wert

Schlussfolgerung

Nicht für Reproduktions- oder Entwicklungstoxizität eingestuft

Toxizität andere Wirkungen

MEGACLEAN

Parameter	Methode	Wert	Organ	Wirkung	Expositionszeit	Spezies	Wertbestimmung
			Haut	Spröde oder rissige Haut			Literaturstudie

Schlussfolgerung

Wiederholter Kontakt kann zu spröder oder rissiger Haut führen.

Chronische Wirkungen nach kurzer oder lang anhaltender Exposition

MEGACLEAN

NACH LANGFRISTIGER/WIEDERHOLTER EXPOSITION/KONTAKT: Trockene Haut. Jucken. Hautausschlag/Entzündung.

ABSCHNITT 12: Umweltbezogene Angaben

12.1. Toxizität

MEGACLEAN

	Parameter	Methode	Wert	Dauer	Spezies	Testplan	Süß-/Salzwasser	Wertbestimmung
Akute Toxizität Fische	LC50	OECD 203	2990 mg/l	96 Std	Pimephales promelas	Statisches System	Süßwasser	Experimenteller Wert; Tödlich
Akute Toxizität Krebstiere	EC50	OECD 202	308 mg/l	48 Std	Daphnia magna	Statisches System	Süßwasser	Experimenteller Wert; Fortbewegung
Toxizität Algen und andere Wasserpflanzen	EC50	OECD 201	1972 mg/l	72 Std	Pseudokirchneria subcapitata	Statisches System	Süßwasser	Experimenteller Wert; Wachstumsrate
Toxizität Wasser-Mikroorganismen	ECO	DIN 38412-8	1150 mg/l	16 Std	Pseudomonas putida	Statisches System	Süßwasser	Experimenteller Wert

Schlussfolgerung

Wenig schädlich für Pflanzen

Nach den Kriterien der Verordnung (EG) Nr. 1272/2008 nicht als umweltgefährlich eingestuft

12.2. Persistenz und Abbaubarkeit

MEGACLEAN

Biologische Abbaubarkeit Wasser

Methode	Wert	Dauer	Wertbestimmung
OECD 301D: Geschlossener Flaschen-Test	98 %	28 Tag(e)	Experimenteller Wert

Überarbeitungsgrund: 2; 3; 5; 16

Datum der Erstellung: 2002-11-06

Datum der Überarbeitung: 2017-05-15

Überabarbeitungsnummer: 0701

Produktnummer: 38712

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Schlussfolgerung

Leicht biologisch abbaubar im Wasser

12.3. Bioakkumulationspotenzial

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Log Kow

Methode	Bemerkung	Wert	Temperatur	Wertbestimmung
OECD 117		0.3	40 °C	Experimenteller Wert

Schlussfolgerung

Niedriges Potenzial für Bioakkumulation (Log Kow < 4)

12.4. Mobilität im Boden

Keine (experimentellen) Daten zur Mobilität des Stoffes vorhanden

12.5. Ergebnisse der PBT- und vPvB-Beurteilung

Stoff erfüllt weder die PBT-Kriterien noch die vPvB-Kriterien gemäß Anhang XIII der Verordnung (EG) Nr. 1907/2006 und ist daher weder ein PBT noch ein vPvB.

12.6. Andere schädliche Wirkungen

MEGACLEAN

Ozonabbaupotential (ODP)

Nicht als gefährlich für die Ozonschicht eingestuft (Verordnung (EG) Nr. 1005/2009)

Grundwasser

Grundwassergefährdend

ABSCHNITT 13: Hinweise zur Entsorgung

Die in diesem Abschnitt enthaltenen Informationen sind eine allgemeine Beschreibung. Wenn anwendbar und vorhanden, sind die Expositionsszenarien aufgenommen in dem Anhang. Sie müssen immer zum Thema gehörende Expositionsszenarien gebrauchen welche ihren identifizierten Verwendungen entsprechen.

13.1. Verfahren der Abfallbehandlung

13.1.1 Abfallvorschriften

Europäische Union

Gefährlicher Abfall nach Richtlinie 2008/98/EG, wie geändert durch Verordnung (EU) Nr. 1357/2014.

Abfallcode (Richtlinie 2008/98/EG, Entscheidung 2000/0532/EG).

07 01 04* (Abfälle aus Herstellung, Zubereitung, Vertrieb und Anwendung (HZVA) organischer Grundchemikalien: andere organische Lösemittel, Waschflüssigkeiten und Mutterlaugen). Abhängig von dem Industriezweig und dem Produktionsprozess können auch andere Abfallcodes anwendbar sein.

13.1.2 Entsorgungshinweise

Rückgewinnung durch Destillation. Verbrennung in genehmigter Anlage für Lösemittel zuführen mit energetischer Verwertung. Darf nicht mit dem Hausmüll deponiert werden. Gefährlicher Abfall soll nicht mit anderem Abfall vermischt werden. Unterschiedliche Arten von gefährlichem Abfall sollen nicht vermischt werden, wenn dies eine Verschmutzung nach sich ziehen kann oder zu Problemen bei der Weiterverarbeitung des Abfalls führen kann. Gefährlicher Abfall muss verantwortungsvoll gehandhabt werden. Alle Einrichtungen, die gefährlichen Abfall lagern, transportieren oder handhaben, müssen die notwendigen Maßnahmen ergreifen, um die Gefahr einer Verschmutzung oder Schädigung von Menschen oder Tieren zu vermeiden. Abfall entsorgen unter Beachtung der örtlichen und/oder nationalen Vorschriften. Darf in eine Abwasserkläranlage eingeleitet werden. Nicht in die Kanalisation oder die Umwelt ableiten.

13.1.3 Verpackung

Europäische Union

Abfallcode Behälter (Richtlinie 2008/98/EG).

15 01 10* (Verpackungen, die Rückstände gefährlicher Stoffe enthalten oder durch gefährliche Stoffe verunreinigt sind).

ABSCHNITT 14: Angaben zum Transport

Straße (ADR)

14.1. UN-Nummer

UN-Nummer	1193
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14.2. Ordnungsgemäße UN-Versandbezeichnung

Ordnungsgemäße Versandbezeichnung	Ethylmethylketon (Methylethylketon)
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14.3. Transportgefahrenklassen

Nummer zur Kennzeichnung der Gefahr	33
Klasse	3
Klassifizierungscode	F1

14.4. Verpackungsgruppe

Verpackungsgruppe	II
Gefahrzettel	3

14.5. Umweltgefahren

Überarbeitungsgrund: 2; 3; 5; 16

Datum der Erstellung: 2002-11-06

Datum der Überarbeitung: 2017-05-15

Überarbeitungsnummer: 0701

Produktnummer: 38712

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Kennzeichen für umweltgefährdende Stoffe	nein
14.6. Besondere Vorsichtsmaßnahmen für den Verwender	
Sondervorschriften	
Begrenzte Mengen	Zusammengesetzte Verpackungen: bis zu 1 Liter je Innenverpackung für flüssige Stoffe. Ein Versandstück darf nicht schwerer sein als 30 kg. (Bruttomassa)

Eisenbahn (RID)

14.1. UN-Nummer	
UN-Nummer	1193
14.2. Ordnungsgemäße UN-Versandbezeichnung	
Ordnungsgemäße Versandbezeichnung	Ethylmethylethylketon (Methylethylketon)
14.3. Transportgefahrenklassen	
Nummer zur Kennzeichnung der Gefahr	33
Klasse	3
Klassifizierungscode	F1
14.4. Verpackungsgruppe	
Verpackungsgruppe	II
Gefahrzettel	3
14.5. Umweltgefahren	
Kennzeichen für umweltgefährdende Stoffe	nein
14.6. Besondere Vorsichtsmaßnahmen für den Verwender	
Sondervorschriften	
Begrenzte Mengen	Zusammengesetzte Verpackungen: bis zu 1 Liter je Innenverpackung für flüssige Stoffe. Ein Versandstück darf nicht schwerer sein als 30 kg. (Bruttomassa)

Binnenwasserstraßen (ADN)

14.1. UN-Nummer	
UN-Nummer	1193
14.2. Ordnungsgemäße UN-Versandbezeichnung	
Ordnungsgemäße Versandbezeichnung	Ethylmethylethylketon (Methylethylketon)
14.3. Transportgefahrenklassen	
Klasse	3
Klassifizierungscode	F1
14.4. Verpackungsgruppe	
Verpackungsgruppe	II
Gefahrzettel	3
14.5. Umweltgefahren	
Kennzeichen für umweltgefährdende Stoffe	nein
14.6. Besondere Vorsichtsmaßnahmen für den Verwender	
Sondervorschriften	
Begrenzte Mengen	Zusammengesetzte Verpackungen: bis zu 1 Liter je Innenverpackung für flüssige Stoffe. Ein Versandstück darf nicht schwerer sein als 30 kg. (Bruttomassa)

See (IMDG/IMSBC)

14.1. UN-Nummer	
UN-Nummer	1193
14.2. Ordnungsgemäße UN-Versandbezeichnung	
Ordnungsgemäße Versandbezeichnung	Ethyl methyl ketone (methyl ethyl ketone)
14.3. Transportgefahrenklassen	
Klasse	3
14.4. Verpackungsgruppe	
Verpackungsgruppe	II
Gefahrzettel	3
14.5. Umweltgefahren	
Marine pollutant	-
Kennzeichen für umweltgefährdende Stoffe	nein
14.6. Besondere Vorsichtsmaßnahmen für den Verwender	
Sondervorschriften	
Begrenzte Mengen	Zusammengesetzte Verpackungen: bis zu 1 Liter je Innenverpackung für flüssige Stoffe. Ein Versandstück darf nicht schwerer sein als 30 kg. (Bruttomassa)

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14.7. Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code

Anhang II von MARPOL 73/78	Nicht anwendbar, basiert auf den vorhandenen Angaben
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Luft (ICAO-TI/IATA-DGR)

14.1. UN-Nummer

UN-Nummer	1193
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14.2. Ordnungsgemäße UN-Versandbezeichnung

Ordnungsgemäße Versandbezeichnung	Ethyl methyl ketone
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14.3. Transportgefahrenklassen

Klasse	3
--------	---

14.4. Verpackungsgruppe

Verpackungsgruppe	II
Gefahrzettel	3

14.5. Umweltgefahren

Kennzeichen für umweltgefährdende Stoffe	nein
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14.6. Besondere Vorsichtsmaßnahmen für den Verwender

Sondervorschriften	
Begrenzte Mengen: höchstzulässige Gesamtmenge je Verpackung	1 L

ABSCHNITT 15: Rechtsvorschriften

15.1. Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch

Europäische Gesetzgebung:

FOV-Gehalt Richtlinie 2010/75/EU

FOV-Gehalt	Bemerkung
100 %	

Bestandteile gemäß der Verordnung (EG) Nr. 648/2004 und Änderungen
≥30% aliphatische Kohlenwasserstoffe

REACH Anhang XVII - Restriktion

Unterliegt den Beschränkungen in Anhang XVII der Verordnung (EG) Nr. 1907/2006: Beschränkungen der Herstellung, des Inverkehrbringens und der Verwendung bestimmter gefährlicher Stoffe, Gemische und Erzeugnisse.

	Bezeichnung des Stoffes, der Stoffgruppen oder der Zubereitungen	Beschränkungsbedingungen
MEGACLEAN	Flüssige Stoffe oder Gemische, die nach der Richtlinie 1999/45/EG als gefährlich gelten oder die Kriterien für eine der folgenden in Anhang I der Verordnung (EG) Nr. 1272/2008 dargelegten Gefahrenklassen oder -kategorien erfüllen: a) Gefahrenklassen 2.1 bis 2.4, 2.6 und 2.7, 2.8 Typen A und B, 2.9, 2.10, 2.12, 2.13 Kategorien 1 und 2, 2.14 Kategorien 1 und 2, 2.15 Typen A bis F; b) Gefahrenklassen 3.1 bis 3.6, 3.7 Beeinträchtigung der Sexualfunktion und Fruchtbarkeit sowie der Entwicklung, 3.8 ausgenommen narkotisierende Wirkungen, 3.9 und 3.10; c) Gefahrenklasse 4.1; d) Gefahrenklasse 5.1.	1. Dürfen nicht verwendet werden — in Dekorationsgegenständen, die zur Erzeugung von Licht- oder Farbeffekten (durch Phasenwechsel), z.B. in Stimmungslampen und Aschenbechern, bestimmt sind; — in Scherzspielen; — in Spielen für einen oder mehrere Teilnehmer oder in Erzeugnissen, die zur Verwendung als solche, auch zur Dekoration, bestimmt sind. 2. Erzeugnisse, die Absatz 1 nicht erfüllen, dürfen nicht in Verkehr gebracht werden. 3. Dürfen nicht in Verkehr gebracht werden, wenn sie einen Farbstoff außer aus steuerlichen Gründen und/oder ein Parfüm enthalten, sofern — sie als für die Abgabe an die breite Öffentlichkeit bestimmter Brennstoff in dekorativen Öllampen verwendet werden können und — ihre Aspiration als gefährlich eingestuft ist und sie mit R65 oder H304 gekennzeichnet sind. 4. Für die Abgabe an die breite Öffentlichkeit bestimmte dekorative Öllampen dürfen nicht in Verkehr gebracht werden, es sei denn, sie erfüllen die vom Europäischen Komitee für Normung (CEN) verabschiedete europäische Norm für dekorative Öllampen (EN 14059). 5. Unbeschadet der Durchführung anderer Gemeinschaftsbestimmungen über die Einstufung, Verpackung und Kennzeichnung gefährlicher Stoffe und Gemische stellen die Lieferanten vor dem Inverkehrbringen sicher, dass folgende Anforderungen erfüllt sind: a) Mit R65 oder H304 gekennzeichnete und für die Abgabe an die breite Öffentlichkeit bestimmte Lampenöle tragen gut sichtbar, leserlich und unverwischbar folgende Aufschriften: 'Mit dieser Flüssigkeit gefüllte Lampen sind für Kinder unzugänglich aufzubewahren' sowie ab dem 1. Dezember 2010 'Bereits ein kleiner Schluck Lampenöl — oder auch nur das Saugen an einem Lampendoht — kann zu einer lebensbedrohlichen Schädigung der Lunge führen'. b) Mit R65 oder H304 gekennzeichnete und für die Abgabe an die breite Öffentlichkeit bestimmte flüssige Grillanzünder tragen ab dem 1. Dezember 2010 leserlich und unverwischbar folgende Aufschrift: 'Bereits ein kleiner Schluck Grillanzünder kann zu einer lebensbedrohlichen Schädigung der Lunge führen'. c) Mit R65 oder H304 gekennzeichnete und für die Abgabe an die breite Öffentlichkeit bestimmte Lampenöle und Grillanzünder werden ab dem 1. Dezember 2010 in schwarzen undurchsichtigen Behältern mit höchstens 1 Liter Füllmenge abgepackt. 6. Bis spätestens 1. Juni 2014 ersucht die Kommission die Europäische Chemikalienagentur, ein Dossier gemäß Artikel 69 dieser Verordnung auszuarbeiten, damit gegebenenfalls ein Verbot von mit R65 oder H304 gekennzeichneten und für die Abgabe an die breite Öffentlichkeit bestimmten flüssigen Grillanzündern und Brennstoffen für dekorative Lampen erlassen wird. 7. Natürliche oder juristische Personen, die mit R65 oder H304 gekennzeichnete Lampenöle und flüssige Grillanzünder erstmals in Verkehr bringen, übermitteln bis 1. Dezember 2011 sowie danach

Überarbeitungsgrund: 2; 3; 5; 16

Datum der Erstellung: 2002-11-06

Datum der Überarbeitung: 2017-05-15

Überarbeitungsnummer: 0701

Produktnummer: 38712

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		jährlich der zuständigen Behörde des betreffenden Mitgliedstaats Daten über Alternativen zu mit R65 oder H304 gekennzeichneten Lampenölen und flüssigen Grillanzündern. Die Mitgliedstaaten machen diese Daten der Kommission zugänglich.“
MEGACLEAN	Stoffe, die als entzündbare Gase der Kategorien 1 oder 2, als entzündbare Flüssigkeiten der Kategorien 1, 2 oder 3, als entzündbare Feststoffe der Kategorie 1 oder 2, als Stoffe und Gemische, die bei Berührung mit Wasser entzündbare Gase entwickeln, der Kategorien 1, 2 oder 3, als selbstentzündliche (pyrophore) Flüssigkeiten der Kategorie 1 oder als selbstentzündliche (pyrophore) Feststoffe der Kategorie 1 eingestuft wurden, und zwar unabhängig davon, ob sie in Anhang VI Teil 3 dieser Verordnung aufgeführt sind.	1. Dürfen weder als Stoff noch als Gemisch in Aerosolpackungen verwendet werden, die dazu bestimmt sind, für Unterhaltungs- und Dekorationszwecke an die breite Öffentlichkeit abgegeben zu werden, wie z. B. für — Dekorationen mit metallischen Glanzeffekten, insbesondere für Festlichkeiten, — künstlichen Schnee und Reif, — unanständige Geräusche, — Luftschlangen, — Scherzexplosionsmittel, — Horntöne für Vergnügungen, — Schäume und Flocken zu Dekorationszwecken, — künstliche Spinnweben, — Stinkbomben.2. Unbeschadet der Anwendung sonstiger gemeinschaftlicher Vorschriften auf dem Gebiet der Einstufung, Verpackung und Etikettierung von Stoffen muss der Lieferant vor dem Inverkehrbringen gewährleisten, dass die Verpackung der oben genannten Aerosolpackungen gut sichtbar, leserlich und unverwischbar mit folgender Aufschrift versehen ist: „Nur für gewerbliche Anwender“.3. Abweichend davon gelten die Absätze 1 und 2 nicht für die in Artikel 8 Absatz 1 Buchstabe a der Richtlinie 75/324/EWG des Rates genannten Aerosolpackungen.4. Die in Absatz 1 und 2 genannten Aerosolpackungen dürfen nur in Verkehr gebracht werden, wenn sie den dort aufgeführten Anforderungen entsprechen.

Nationale Gesetzgebung Belgien

Keine Daten vorhanden

Nationale Gesetzgebung Die Niederlande

Abfallidentifikation (die Niederlande)	LWCA (die Niederlande): KGA Kategorie 03
Waterbezwaarlijkheid	B (5)
Huidopname (wettelijk)	2-Butanon; H

Nationale Gesetzgebung Frankreich

VME - Risque de pénétration percutanée	Méthyléthylcétone; PP
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Nationale Gesetzgebung Deutschland

WGK	1; Einstufung wassergefährdend nach Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) vom 27. Juli 2005 (Anhang 2)
TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	Butanon; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	Butanon; H; Hautresorptiv

Nationale Gesetzgebung UK

Skin absorption	Butan-2-one (methyl ethyl ketone); Sk
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Sonstige relevante Daten

Keine Daten vorhanden

15.2. Stoffsicherheitsbeurteilung

ABSCHNITT 16: Sonstige Angaben

Vollständiger Wortlaut aller unter Punkt 2 und 3 aufgeführten H-Sätze:

- H225 Flüssigkeit und Dampf leicht entzündbar.
H319 Verursacht schwere Augenreizung.
H336 Kann Schläfrigkeit und Benommenheit verursachen.

(*)	SELBSTEINSTUFUNG VON BIG
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europa)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioakkumulierbar & Toxisch

Überarbeitungsgrund: 2; 3; 5; 16

Datum der Erstellung: 2002-11-06

Datum der Überarbeitung: 2017-05-15

Überarbeitungsnummer: 0701

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PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

Alle in diesem Sicherheitsdatenblatt enthaltenen Informationen basieren auf den von BIG gelieferten Daten und Mustern. Die Angaben erfolgen nach bestem Wissen und Gewissen und entsprechen dem Kenntnisstand zum Zeitpunkt der Erstellung des Sicherheitsdatenblattes. Das Sicherheitsdatenblatt vermittelt lediglich Anleitungen, wie man die unter Punkt 1 aufgeführten Stoffe/Zubereitungen/Gemische sicher handhabt, verwendet, verbraucht, lagert, transportiert und entsorgt. Zu gegebener Zeit werden neue Sicherheitsdatenblätter erstellt, von denen ausschließlich die jeweils aktuellste Fassung verwendet werden darf. Ältere Fassungen müssen vernichtet werden. Sofern nicht ausdrücklich anderweitig im Sicherheitsdatenblatt angegeben, gelten die in ihm angegebenen Informationen nicht für die Stoffe/Zubereitungen/Gemische in einer reineren Form, als Mischung mit anderen Stoffen oder in anderer Verarbeitung. Das Sicherheitsdatenblatt spezifiziert nicht die Qualität der betreffenden Stoffe/Zubereitungen/Gemische. Die Einhaltung der im Sicherheitsdatenblatt enthaltenen Anweisungen entbindet den Verbraucher nicht von seiner Pflicht, alle Maßnahmen zu treffen, die der gesunde Menschenverstand sowie die Vorschriften und Empfehlungen diesbezüglich nahelegen oder die auf der Grundlage der konkreten Verwendungsbedingungen notwendig und/oder nützlich sind. BIG garantiert weder die Richtigkeit noch die Vollständigkeit der hier enthaltenen Informationen und kann nicht für etwaige Änderungen durch Dritte haftbar gemacht werden. Das vorliegende Sicherheitsdatenblatt ist ausschließlich für die Verwendung in der Europäischen Union, der Schweiz, Island, Norwegen und Liechtenstein bestimmt. Jede Verwendung außerhalb des Geltungsbereiches erfolgt auf eigene Gefahr. Die Verwendung des vorliegenden Sicherheitsdatenblattes unterliegt den in Ihrer BIG-Lizenzvereinbarung enthaltenen Lizenz- und Haftungsbeschränkungsbestimmungen oder – wenn diese nicht anzuwenden sind – den allgemeinen Bestimmungen von BIG. Alle mit diesem Sicherheitsdatenblatt verbundenen geistigen Eigentumsrechte sind Eigentum von BIG; die Verteilungs- und Reproduktionsrechte sind eingeschränkt. Einzelheiten entnehmen Sie bitte der genannten Vereinbarung bzw. den Bestimmungen.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES01: Manufacture of substance - Industrial
Use descriptor	Sector of use: SU 3, SU8, SU9 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 15 Environmental release categories: ERC 1, ERC 4
Scope of the process	Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use/exposure	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
General exposure (closed systems)	No other specific measures identified.
General exposure (open systems)	No other specific measures identified.
Process sampling	No other specific measures identified.
Laboratory activities	No other specific measures identified.

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Bulk transfers (open systems)	No other specific measures identified.
Bulk transfers (closed systems)	No other specific measures identified.
Equipment cleaning and maintenance	Drain down system prior to equipment break-in or maintenance.
Storage	Store the substance in a closed system.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES02: Use as an intermediate - Industrial
Use descriptor	Sector of use: SU 3, SU8, SU9 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 15 Environmental release categories: ERC 6A
Scope of the process	Use of substance as an intermediate (not related to strictly controlled conditions). Includes recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use/exposure	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
General exposure (closed systems)	No other specific measures identified.
General exposure (open systems)	No other specific measures identified.
Process sampling	No other specific measures identified.
Laboratory activities	No other specific measures identified.

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Bulk transfers (open systems)	No other specific measures identified.
Bulk transfers (closed systems)	No other specific measures identified.
Equipment cleaning and maintenance	Drain down system prior to equipment break-in or maintenance.
Storage	Store the substance in a closed system.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment	
No exposure assessment presented for the environment.	

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment	
No exposure assessment presented for the environment.	

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES03: Distribution of substance - Industrial
Use descriptor	Sector of use: SU 3, SU8, SU9 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9, PROC 15 Environmental release categories: ERC 1, ERC 2, ERC 3, ERC 4, ERC 5, ERC 6A, ERC 7
Scope of the process	Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use/exposure	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
General exposure (closed systems)	No other specific measures identified.
General exposure (open systems)	Clear transfer lines prior to de-coupling. No other specific measures identified.
Process sampling	No other specific measures identified.
Laboratory activities	No other specific measures identified.

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Bulk transfers (open systems)	No other specific measures identified.
Bulk transfers (closed systems)	No other specific measures identified.
Drum and small package filling	Fill containers/cans at dedicated fill points supplied with local extract ventilation.
Equipment cleaning and maintenance	Drain down and flush system prior to equipment break-in or maintenance.
Storage	No other specific measures identified.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES04: Formulation & (re)packaging of substances and mixtures - Industrial
Use descriptor	Sector of use: SU 3, SU 10 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 9, PROC 14, PROC 15 Environmental release categories: ERC 2
Scope of the process	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
General exposure (closed systems)	No other specific measures identified.
General exposure (open systems)	No other specific measures identified.
Batch processes at elevated temperatures (closed systems)	No other specific measures identified.

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Process sampling	No other specific measures identified.
Laboratory activities	No other specific measures identified.
Bulk transfers	No other specific measures identified.
Mixing operations (open systems)	Provide extract ventilation to points where emissions occur. or Wear a respirator conforming to EN140 with Type A filter or better.
Manual Transfer from/pouring from containers	Use drum pumps or carefully pour from container.
Drum/batch transfers	Use drum pumps or carefully pour from container.
Production or preparation of articles by tabletting, compression, extrusion or pelletisation.	Provide extract ventilation to points where emissions occur. or Wear a respirator conforming to EN140 with Type A filter or better.
Drum and small package filling	Fill containers/cans at dedicated fill points supplied with local extract ventilation.
Equipment cleaning and maintenance	Drain down and flush system prior to equipment break-in or maintenance.
Storage	Store the substance in a closed system. Transfer via enclosed lines. Locate bulk storage outdoors.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.	

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Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.

Section 4.2 - Environment

No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES05: Uses in coatings - Industrial
Use descriptor	Sector of use: SU 3 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 7, PROC 8a, PROC 8b, PROC 10, PROC 13, PROC 15 Environmental release categories: ERC 4
Scope of the process	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use/exposure	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
General exposure (closed systems)	No other specific measures identified.
General exposure (closed systems) with sample collection	Ensure material transfers are under containment or extract ventilation.

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Film formation - air drying (closed systems)	Ensure material transfers are under containment or extract ventilation.
Mixing operations (closed systems)	Ensure material transfers are under containment or extract ventilation.
Film formation - air drying (open systems)	Provide extract ventilation to points where emissions occur.
Preparation of material for application Mixing operations (open systems)	Provide extract ventilation to points where emissions occur.
Spraying (automatic/robotic)	Carry out in a vented booth provided with laminar airflow.
Manual spraying	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear a respirator conforming to EN140 with Type A filter or better.
Material transfers	Provide extract ventilation to points where emissions occur. or Avoid carrying out activities involving exposure for more than 1 hour.
Roller, spreader, flow application	Use ventilation to extract vapours from freshly coated articles/objects and surfaces.
Dipping, immersion and pouring	Provide extract ventilation to points where emissions occur. Avoid manual contact with wet work pieces.
Laboratory activities	Provide extract ventilation to points where emissions occur.
Material transfers Drum/batch transfers Transfer from/pouring from containers	Ensure material transfers are under containment or extract ventilation.
Production or preparation of articles by tableting, compression, extrusion or pelletisation.	Provide extract ventilation to points where emissions occur.
Storage	Store the substance in a closed system.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

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SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 3.2 - Environment	
No exposure assessment presented for the environment.	
SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	
Section 4.2 - Environment	
No exposure assessment presented for the environment.	

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES06: Uses in coatings - Professional
Use descriptor	Sector of use: SU 22 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 10, PROC 11, PROC 13, PROC 15, PROC 19 Environmental release categories: ERC 8A, ERC 8D
Scope of the process	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods, and film formation), and equipment cleaning, maintenance and associated laboratory activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
General exposure (closed systems)	No other specific measures identified.
General exposure (closed systems) with occasional controlled	No other specific measures identified.

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exposure.	
Filling / preparation of equipment from drums or containers	Ensure material transfers are under containment or extract ventilation.
Preparation of material for application (closed systems)	No other specific measures identified.
Film formation - air drying Outdoor.	Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Film formation - air drying Indoor.	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Provide extract ventilation to points where emissions occur.
Preparation of material for application (open systems) Indoor	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out operation for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Preparation of material for application (open systems) Outdoor.	Wear a respirator conforming to EN140 with Type A filter or better.
Material transfers Drum/batch transfers	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out operation for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Roller, spreader, flow application Indoor	Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
Roller, spreader, flow application Outdoor.	Wear a respirator conforming to EN140 with Type A filter or better.
Manual Spraying Indoor	Carry out in a vented booth or extracted enclosure. Wear a respirator conforming to EN140 with Type A filter or better.

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Manual spraying Outdoor.	Avoid carrying out activities involving exposure for more than 4 hours. Wear a respirator conforming to EN140 with Type A filter or better.
Dipping, immersion and pouring Indoor	Provide extract ventilation to points where emissions occur. Avoid manual contact with wet work pieces.
Dipping, immersion and pouring Outdoor.	Avoid manual contact with wet work pieces.
Laboratory activities	Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
Manual application - Fingerpaints, pastels, adhesives Indoor	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear a respirator conforming to EN140 with Type A filter or better.
Manual application - Fingerpaints, pastels, adhesives Outdoor.	Wear a respirator conforming to EN140 with Type A filter or better.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES07: Uses in cleaning agents - Industrial
Use descriptor	Sector of use: SU 3 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 7, PROC 8a, PROC 8b, PROC 10, PROC 13 Environmental release categories: ERC 4
Scope of the process	Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. Exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
Bulk transfers Dedicated facility	Avoid carrying out activities involving exposure for more than 1 hour.
Automated process with (semi) closed systems Use in contained systems	Avoid carrying out activities involving exposure for more than 4 hours.

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Drum/batch transfers	Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Application of cleaning products in closed systems	Avoid carrying out activities involving exposure for more than 4 hours.
Filling / preparation of equipment from drums or containers	Ensure material transfers are under containment or extract ventilation.
Use in contained batch processes	Provide extract ventilation to points where emissions occur.
Degreasing small objects in cleaning station	Provide extract ventilation to points where emissions occur.
Cleaning with low pressure washers	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Cleaning with high pressure washers	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Manual Surfaces cleaning No spraying	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

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SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	
Section 4.2 - Environment	
No exposure assessment presented for the environment.	

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES08: Uses in cleaning agents - Professional
Use descriptor	Sector of use: SU 22 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 10, PROC 11, PROC 13, PROC 8a, PROC 8b Environmental release categories: ERC 8A, ERC 8B
Scope of the process	Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
Filling / preparation of equipment from drums or containers	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Automated process with (semi) closed systems	Avoid carrying out activities involving exposure for more than 4 hours.

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Use in contained systems	
Drum/batch transfers	Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Semi automated process. (e.g. semi automatic application of floor care and maintenance products)	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 4 hours. or Wear a respirator conforming to EN140 with Type A filter or better.
Filling / preparation of equipment from drums or containers.	Ensure operation is undertaken outdoors. Wear a respirator conforming to EN140 with Type A filter or better.
Manual Surfaces cleaning Dipping, immersion and pouring	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 4 hours. or Wear a respirator conforming to EN140 with Type A filter or better.
Cleaning with low pressure washers Rolling, brushing No spraying	Limit the substance content in the product to 5%. Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
Cleaning with high pressure washers Spraying Indoor	Limit the substance content in the product to 1%. Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
Cleaning with high pressure washers Spraying Outdoor.	Limit the substance content in the product to 1%. Avoid carrying out activities involving exposure for more than 4 hours. or Wear a respirator conforming to EN140 with Type A filter or better.
Manual Surfaces cleaning Spraying	Limit the substance content in the product to 25%. Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Ad hoc manual application via trigger sprays, dipping, etc.	Limit the substance content in the product to 25%. Provide extract ventilation to points where emissions occur.

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Rolling, brushing	Avoid carrying out operation for more than 4 hour. or Wear a respirator conforming to EN140 with Type A filter or better. Wear suitable gloves tested to EN374.
Application of cleaning products in closed systems Outdoor.	Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with Type A filter or better.
Cleaning of medical devices	Provide extract ventilation to points where emissions occur. Avoid carrying out activities involving exposure for more than 4 hours. or Wear a respirator conforming to EN140 with Type A filter or better.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES09: Lubricants – Industrial
Use descriptor	Sector of use: SU 3 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 7, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 13, PROC 17, PROC 18 Environmental release categories: ERC 4, ERC 7
Scope of the process	Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use/exposure	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
General exposure (closed systems) with occasional controlled exposure.	No other specific measures identified.
General exposure (open systems)	No other specific measures identified.
Bulk transfers	No other specific measures identified.

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Filling / preparation of equipment from drums or containers	Transfer via enclosed lines Use drum pumps or carefully pour from container.
Initial factory fill of equipment	Ensure material transfers are under containment or extract ventilation.
Operation and lubrication of high energy open equipment	Restrict area of openings to equipment.
Manual Rolling, brushing	Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
Treatment by dipping and pouring	Restrict area of openings to equipment.
Spraying	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.
Maintenance (of larger plant items) and machine set up	Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely. Wear suitable gloves tested to EN374.
Maintenance of small items	Avoid carrying out activities involving exposure for more than 4 hours.
Remanufacture of reject articles	Avoid carrying out activities involving exposure for more than 4 hours.
Storage	No other specific measures identified.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.	

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Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.

Section 4.2 - Environment

No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES10: Metal working fluids / rolling oils - Industrial
Use descriptor	Sector of use: SU 3 Process categories: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 7, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 13, PROC 17 Environmental release categories: ERC 4
Scope of the process	Covers the use in formulated MWFs/rolling oils within closed or contained systems including incidental exposures during transfer operations, rolling and annealing activities, cutting/machining activities, automated application of corrosion protections, equipment maintenance, draining and disposal of waste oils.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
General exposure (closed systems)	No other specific measures identified.
General exposure (open systems)	No other specific measures identified.
Bulk transfers	Provide enhanced general ventilation by mechanical means. or

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	Ensure operation is undertaken outdoors. Avoid carrying out operation for more than 1 hour. Clear transfer lines prior to de-coupling.
Filling / preparation of equipment from drums or containers	Use drum pumps or carefully pour from container.
Process sampling	Use dedicated equipment.
Metal working activities	Provide extract ventilation to points where emissions occur. Restrict area of openings to equipment.
Treatment by dipping and pouring	Provide enhanced general ventilation by mechanical means.
Spraying	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.
Manual rolling, brushing	Provide enhanced general ventilation by mechanical means.
Automated metal rolling/forming	Handle substance within a predominantly closed system provided with extract ventilation. Provide extract ventilation to points where emissions occur.
Semi-automated metal rolling/forming	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.
Equipment cleaning and maintenance Dedicated facility	No other specific measures identified.
Equipment cleaning and maintenance Non-dedicated facility	Provide enhanced general ventilation by mechanical means. Drain or remove substance from equipment prior to break-in or maintenance.
Storage	Store the substance in a closed system. Transfer via enclosed lines

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

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Section 3.2 - Environment	
No exposure assessment presented for the environment.	
SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	
Section 4.2 - Environment	
No exposure assessment presented for the environment.	

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES11: Use in agrochemicals - Professional
Use descriptor	Sector of use: SU 22 Process categories: PROC 1, PROC 2, PROC 4, PROC 8a, PROC 8b, PROC 11, PROC 13 Environmental release categories: ERC 8A, ERC 8D
Scope of the process	Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging; including equipment clean-downs and disposal.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
Transfer from/pouring from containers	Ensure operation is undertaken outdoors.
Mixing in containers.	Ensure operation is undertaken outdoors.
Spraying/fogging by manual application	Wear a full face respirator conforming to EN136 with Type A filter or better.
Spraying/fogging by machine application	Apply within a vented cab supplied with filtered air under positive pressure and with a protection factor of >20.
Ad hoc manual	Wear suitable gloves tested to EN374.

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application via trigger sprays, dipping, etc.	Wear a respirator conforming to EN140 with Type A filter or better.
Equipment cleaning and maintenance	Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Avoid carrying out activities involving exposure for more than 1 hour.
Disposal of waste	Ensure operation is undertaken outdoors. Wear suitable gloves tested to EN374. Avoid carrying out activities involving exposure for more than 1 hour.
Storage	Store the substance in a closed system.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES12: Use as a fuel - Industrial
Use descriptor	Sector of use: SU 3 Process categories: PROC 1, PROC 2, PROC 3, PROC 8a, PROC 8b, PROC 16 Environmental release categories: ERC 7
Scope of the process	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
Bulk transfers	Transfer via enclosed lines Clear transfer lines prior to de-coupling.
Drum/batch transfers	Use drum pumps or carefully pour from container.
General exposure (closed systems)	No other specific measures identified.
Use as a fuel (closed systems)	No other specific measures identified.
Equipment cleaning and maintenance	Drain down and flush system prior to equipment break-in or maintenance.

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Storage	Store the substance in a closed system. Transfer via enclosed lines Ensure operation is undertaken outdoors.
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Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES13: Use as a fuel - Professional
Use descriptor	Sector of use: SU 22 Process categories: PROC 1, PROC 2, PROC 3, PROC 8a, PROC 8b, PROC 16 Environmental release categories: ERC 9A, ERC 9B
Scope of the process	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
Bulk transfers	Transfer via enclosed lines Clear transfer lines prior to de-coupling.
Drum/batch transfers	Use drum pumps or carefully pour from container. Avoid spillage when withdrawing pump.
Refuelling	Use drum pumps or carefully pour from container. Avoid spillage when withdrawing pump.
General exposure (closed systems)	No other specific measures identified.
Use as a fuel	No other specific measures identified.

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(closed systems)	
Equipment cleaning and maintenance	Drain down and flush system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or for subsequent recycle.
Storage	Store the substance in a closed system.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES14: Use in laboratories - Industrial
Use descriptor	Sector of use: SU 3 Process categories: PROC 10, PROC 15 Environmental release categories: ERC 2, ERC 4
Scope of the process	Use of the substance within laboratory settings, including material transfers and equipment cleaning.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
Laboratory activities	No other specific measures identified.
Cleaning	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Ensure the ventilation system is regularly maintained and tested.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	

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Section 3.2 - Environment	
No exposure assessment presented for the environment.	
SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	
Section 4.2 - Environment	
No exposure assessment presented for the environment.	

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Exposure scenario – worker

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES15: Use in laboratories - Professional
Use descriptor	Sector of use: SU 22 Process categories: PROC 10, PROC 15 Environmental release categories: ERC 8A
Scope of the process	Use of small quantities within laboratory settings, including material transfers and equipment cleaning.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of worker exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 kPa at STP.
Concentration of substance in product.	Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other given operational conditions affecting workers exposure.	
Assumes a good basic standard of occupational hygiene is implemented.	

Contributing scenarios	Risk management measures
General measures (eye irritants).	Use suitable eye protection. Avoid direct contact of product with the eyes, also via contamination on hands.
Laboratory activities	No other specific measures identified.
Cleaning	Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. Ensure the ventilation system is regularly maintained and tested.

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	

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used unless otherwise indicated.

Section 3.2 - Environment

No exposure assessment presented for the environment.

SECTION 4

GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.

Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.

Section 4.2 - Environment

No exposure assessment presented for the environment.

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Exposure scenario – consumer

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES16: Uses in coatings - consumer
Use descriptor	Sector of use: SU 21 Product categories: PC1, PC4, PC8 (binding agents only), PC9a, PC9b, PC15, PC18, PC23, PC24, PC31, PC34 Environmental release categories: ERC 8A, ERC 8D
Scope of the process	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of consumer exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 Pa at STP
Concentration of substance in product.	Unless otherwise indicated.
	Covers concentrations up to (%): 100%
Amounts used	
Unless otherwise indicated.	
For each use event, covers use amounts up to (g):	13,800
Covers skin contact area up to (cm²):	857.5
Frequency and duration of use/exposure	
Unless otherwise indicated.	
Covers use up to (times/day of use):	1
Covers use up to (hours/event):	6
Other given operational conditions affecting user exposure	
Unless otherwise indicated.	
Covers use at ambient temperatures. Covers use in room size of 20m³	
Covers use under typical household ventilation.	

Product categories	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Adhesives, sealants Glues, hobby use.	Covers concentrations up to 30%
	Covers use up to 365 days/year
	Covers use up to 1 time/day

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	Covers skin contact area up to 35.73 cm ²
	For each use event, covers use amounts up to 9 g
	Covers use in room size of 20m ³
	Covers exposure up to 4 hours/event
Adhesives, sealants Glues DIY-use (carpet glue, tile glue, wood parquet glue)	Covers concentrations up to 30%
	Covers use up to 1 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 110.00 cm ²
	For each use event, covers use amounts up to 6,390 g
	Covers use in room size of 20m ³
	Covers exposure up to 6.00 hours/event
Adhesives, sealants Glue from spray	Covers concentrations up to 30%
	Covers use up to 6 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 35.73 cm ²
	For each use event, covers use amounts up to 85.05 g
	Covers use in room size of 20m ³
	Covers exposure up to 4.00 hours/event
Adhesives, sealants Sealants	Covers concentrations up to 20%
	Covers use up to 365 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 35.73 cm ²
	For each use event, covers use amounts up to 75 g
	Covers use in room size of 34 m ³
	Covers exposure up to 1.00 hours/event
Anti-freeze and de-icing products. Washing car windows	Covers concentrations up to 1%
	Covers use up to 365 days/year
	Covers use up to 1 time/day
	For each use event, covers use amounts up to 0.5 g
	Covers use in a one car garage (34 m ³) under typical ventilation. 34 m ³
	Covers use in room size of 34 m ³
	Covers exposure up to 0.02 hours/event
Anti-freeze and de-icing products. Pouring into radiator	Covers concentrations up to 10%
	Covers use up to 365 days/year

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	Covers use up to 1 time/day
	Covers skin contact area up to 428 cm ²
	For each use event, covers use amounts up to 2,000 g
	Covers use in a one car garage (34 m ³) under typical ventilation. 34 m ³
	Covers use in room size of 34 m ³
	Covers exposure up to 0.17 hours/event
Biocidal products (e.g. disinfectants, pest control) cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) PC8 (binding agents only)	Covers concentrations up to 5%
	Covers use up to 128 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, covers use amounts up to 27 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.33 hours/event
Biocidal products (e.g. disinfectants, pest control) Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) PC8 (binding agents only)	Covers concentrations up to 15%
	Covers use up to 128 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 428 cm ²
	For each use event, covers use amounts up to 35 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.17 hours/event
Coatings and paints, thinners, paint removers Solvent rich, high solid, water borne paint	Covers concentrations up to 27.5%
	Covers use up to 6 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 428.75 cm ²
	For each use event, covers use amounts up to 744 g
	Covers use in room size of 20m ³

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	Covers exposure up to 2.20 hours/event
Coatings and paints, thinners, paint removers Aerosol spray can	Covers concentrations up to 50%
	Covers use up to 2 days/year
	Covers use up to 1 time/day
	For each use event, covers use amounts up to 215 g
	Covers use in a one car garage (34 m ³) under typical ventilation.
	Covers use in room size of 34 m ³
	Covers exposure up to 0.33 hours/event
Coatings and paints, thinners, paint removers Removers (paint-, glue-, wall paper-, sealant-remover)	Covers concentrations up to 50%
	Covers use up to 3 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, covers use amounts up to 491 g
	Covers use in room size of 20m ³
	Covers exposure up to 2.00 hours/event
Fillers and putty	Covers concentrations up to 2%
	Covers use up to 12 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 35.73 cm ³
	For each use event, covers use amounts up to 85 g
	Covers use in room size of 20m ³
	Covers exposure up to 4 hours/event
Fillers and putty Plasters and floor equalizers	Covers concentrations up to 2%
	Covers use up to 12 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, covers use amounts up to 13,800 g
	Covers use in room size of 20m ³
	Covers exposure up to 2.00 hours/event
Non-metal-surface treatment products Solvent rich, high solid, water borne paint	Covers concentrations up to 27.5%
	Covers use up to 6 days/year

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	Covers use up to 1 time/day
	Covers skin contact area up to 428.75 cm ²
	For each use event, covers use amounts up to 744 g
	Covers use in room size of 20m ³
	Covers exposure up to 2.20 hours/event
Non-metal-surface treatment products Aerosol spray can	Covers concentrations up to 50%
	Covers use up to 2 days/year
	Covers use up to 1 time/day
	For each use event, covers use amounts up to 215 g
	Covers use in a one car garage (34 m ³) under typical ventilation.
	Covers use in room size of 34 m ³
	Covers exposure up to 0.33 hours/event
Non-metal-surface treatment products Removers (paint-, glue-, wall paper-, sealant-remover)	Covers concentrations up to 50%
	Covers use up to 3 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, covers use amounts up to 491 g
	Covers use in room size of 20m ³
	Covers exposure up to 2.00 hours/event
Ink and toners	Covers concentrations up to 10%
	Covers use up to 365 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 71.40 cm ²
	For each use event, covers use amounts up to 40 g
	Covers use in room size of 20m ³
	Covers exposure up to 2.20 hours/event
Leather tanning, dye, finishing, impregnation and care products Polishes, wax / cream (floor, furniture, shoes)	Covers concentrations up to 50%
	Covers use up to 29 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 430.00 cm ²
	For each use event, covers use amounts up to 56 g
	Covers use in room size of 20m ³
	Covers exposure up to 1.23 hours/event
Leather tanning,	Covers concentrations up to 50%

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dye, finishing, impregnation and care products Polishes, spray (furniture, shoes)	
	Covers use up to 8 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 430.00 cm ²
	For each use event, covers use amounts up to 56 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.33 hours/event
Lubricants, greases and release products Liquids	Covers concentrations up to 100%
	Covers use up to 4 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 468.00 cm ²
	For each use event, covers use amounts up to 2,200 g
	Covers use in a one car garage (34 m ³) under typical ventilation.
	Covers use in room size of 34 m ³
	Covers exposure up to 0.17 hours/event
Lubricants, greases and release products Pastes	Covers concentrations up to 20%
	Covers use up to 10 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 468.00 cm ²
	For each use event, covers use amounts up to 34 g
	Covers use in room size of 20m ³
Lubricants, greases and release products Sprays	Covers concentrations up to 50%
	Covers use up to 6 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 428.75 cm ²
	For each use event, covers use amounts up to 73 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.17 hours/event
Polishes and wax blends Polishes, wax / cream (floor, furniture, shoes)	Covers concentrations up to 50%
	Covers use up to 29 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 430.00 cm ²
	For each use event, covers use amounts up to 142 g
	Covers use in room size of 20m ³
	Covers exposure up to 1.23 hours/event
Polishes and wax blends Polishes, spray (furniture,	Covers concentrations up to 50%

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shoes)	
	Covers use up to 8 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 430.00 cm ²
	For each use event, covers use amounts up to 35 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.33 hours/event
Textile dyes, finishing and impregnating products; including bleaches and other processing aids	Covers concentrations up to 10%
	Covers use up to 365 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, covers use amounts up to (g): 115 g
	Covers use in room size of 20m ³
	Covers exposure up to 1.00 hours/event

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – consumer

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES17: Uses in cleaning agents - consumer
Use descriptor	Sector of use: SU 21 Product categories: PC9a, PC9b, PC24, PC35 Environmental release categories: ERC 8A, ERC 8D
Scope of the process	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of consumer exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 Pa at STP
Concentration of substance in product.	Unless otherwise indicated.
	Covers concentrations up to (%): 50%
Amounts used	
Unless otherwise indicated.	
For each use event, covers use amounts up to (g):	13,800
Covers skin contact area up to (cm ²):	857.5
Frequency and duration of use/exposure	
Unless otherwise indicated.	
Covers use up to (times/day of use):	0.35
Covers use up to (hours/event):	2.2
Other given operational conditions affecting user exposure	
Unless otherwise indicated.	
Covers use at ambient temperatures. Covers use in room size of 20m ³	
Covers use under typical household ventilation.	

Product categories	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Coatings and paints, thinners, paint removers Solvent rich, high solid, water borne paint	Covers concentrations up to 27.5%
	Covers use up to 6 days/year

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	Covers use up to 1 time/day
	Covers skin contact area up to 428.75 cm ²
	For each use event, covers use amounts up to 744 g
	Covers use in room size of 20m ³
	Covers exposure up to 2.20 hours/event
Coatings and paints, thinners, paint removers Aerosol spray can	Covers concentrations up to 50%
	Covers use up to 2 days/year
	Covers use up to 1 time/day
	For each use event, covers use amounts up to 215 g
	Covers use in a one car garage (34 m ³) under typical ventilation.
	Covers use in room size of 34 m ³
	Covers exposure up to 0.33 hours/event
Coatings and paints, thinners, paint removers Removers (paint-, glue-, wall paper-, sealant-remover)	Covers concentrations up to 50%
	Covers use up to 3 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, covers use amounts up to 491 g
	Covers use in room size of 20m ³
	Covers exposure up to 2.00 hours/event
Fillers and putty Plasters and floor equalizers	Covers concentrations up to 2%
	Covers use up to 12 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, covers use amounts up to 13,800 g
	Covers use in room size of 20m ³
	Covers exposure up to 2.00 hours/event
Lubricants, greases and release products Liquids	Covers concentrations up to 50%
	Covers use up to 4 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 468 cm ²
	For each use event, covers use amounts up to 2,200 g
	Covers use in a one car garage (34 m ³) under typical ventilation.
	Covers use in room size of 34 m ³
	Covers exposure up to 0.17 hours/event

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Lubricants, greases and release products Pastes	Covers concentrations up to 20%
	Covers use up to 10 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 468 cm ²
	For each use event, covers use amounts up to 34 g
	Covers use in room size of 20m ³
Lubricants, greases and release products Sprays	Covers concentrations up to 20%
	Covers use up to 6 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 428.75 cm ²
	For each use event, covers use amounts up to 73 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.17 hours/event
Washing and cleaning products (including solvent based products) Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)	Covers concentrations up to 5%
	Covers use up to 128 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, covers use amounts up to 27 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.33 hours/event
Washing and cleaning products (including solvent based products) Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)	Covers concentrations up to 15%
	Covers use up to 128 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 428 cm ²
	For each use event, covers use amounts up to 35 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.17 hours/event

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
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Section 3.1 - Health

The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 3.2 - Environment

No exposure assessment presented for the environment.

SECTION 4

GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.
Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.

Section 4.2 - Environment

No exposure assessment presented for the environment.

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Exposure scenario – consumer

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES18: Lubricants – consumer
Use descriptor	Sector of use: SU 21 Product categories: PC1, PC24, PC31 Environmental release categories: ERC 8A, ERC 8D, ERC 9A, ERC 9B
Scope of the process	Covers the consumer use of formulated lubricants in closed and open systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of consumer exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 Pa at STP
Concentration of substance in product.	Unless otherwise indicated.
	Covers concentrations up to (%): 100%
Amounts used	
Unless otherwise indicated.	
For each use event, covers use amounts up to (g):	6,390
Covers skin contact area up to (cm ²):	468
Frequency and duration of use/exposure	
Unless otherwise indicated.	
Covers use up to (times/day of use):	1
Covers use up to (hours/event):	6
Other given operational conditions affecting user exposure	
Unless otherwise indicated. Covers use at ambient temperatures. Covers use in room size of 20m ³ Covers use under typical household ventilation.	

Product categories	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Adhesives, sealants Glues, hobby use.	Covers concentrations up to 30%
	Covers use up to 365 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 35.73 cm ²

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	For each use event, covers use amounts up to 9 g
	Covers use in room size of 20m ³
	Covers exposure up to 4.00 hours/event
Adhesives, sealants Glues DIY-use (carpet glue, tile glue, wood parquet glue)	Covers concentrations up to 30%
	Covers use up to 1 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 110.00 cm ²
	For each use event, covers use amounts up to 6,390 g
	Covers use in room size of 20m ³
	Covers exposure up to 6.00 hours/event
Adhesives, sealants Glue from spray	Covers concentrations up to 30%
	Covers use up to 6 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 35.73 cm ²
	For each use event, covers use amounts up to 85.05 g
	Covers use in room size of 20m ³
	Covers exposure up to 4.00 hours/event
Adhesives, sealants Plasters and floor equalizers Sealants	Covers concentrations up to 25%
	Covers use up to 365 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 35.73 cm ²
	For each use event, covers use amounts up to 75 g
	Covers use in room size of 20m ³
	Covers exposure up to 1.00 hours/event
Lubricants, greases and release products Liquids	Covers concentrations up to 100%
	Covers use up to 4 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 468 cm ²
	For each use event, covers use amounts up to 2,200 g
	Covers use in a one car garage (34 m ³) under typical ventilation.
	Covers use in room size of 34 m ³
	Covers exposure up to 0.17 hours/event
Lubricants, greases and release products Pastes	Covers concentrations up to 20%
	Covers use up to 10 days/year

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	Covers use up to 1 time/day
	Covers skin contact area up to 468 cm ²
	For each use event, covers use amounts up to 34 g
	Covers use in room size of 20m ³
Lubricants, greases and release products Sprays	Covers concentrations up to 50%
	Covers use up to 6 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 428.75 cm ²
	For each use event, covers use amounts up to 73 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.17 hours/event
Polishes and wax blends Polishes, wax / cream (floor, furniture, shoes)	Covers concentrations up to 50%
	Covers use up to 29 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 430.00 cm ²
	For each use event, covers use amounts up to 142 g
	Covers use in room size of 20m ³
	Covers exposure up to 1.23 hours/event
Polishes and wax blends Polishes, spray (furniture, shoes)	Covers concentrations up to 50%
	Covers use up to 8 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 430.00 cm ²
	For each use event, covers use amounts up to 35 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.33 hours/event

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 - Environment	
No exposure assessment presented for the environment.	

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the	

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risk management measures/operational conditions outlined in section 2 are implemented.
Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.

Section 4.2 - Environment

No exposure assessment presented for the environment.

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Exposure scenario – consumer

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES19: Use in agrochemicals - consumer
Use descriptor	Sector of use: SU 21 Product categories: PC12, PC27 Environmental release categories: ERC 8A, ERC 8D
Scope of the process	Covers the consumer use in agrochemicals in liquid and solid forms.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of consumer exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 Pa at STP
Concentration of substance in	Unless otherwise indicated.
	Covers concentrations up to (%): 4%
Amounts used	
Unless otherwise indicated.	
For each use event, covers use amounts up to (g):	50
Covers skin contact area up to (cm ²):	857.5
Frequency and duration of use/exposure	
Unless otherwise indicated.	
Covers use up to (times/day of use):	1
Covers use up to (hours/event):	0.5
Other given operational conditions affecting user exposure	
Unless otherwise indicated.	
Covers use at ambient temperatures. Covers use in room size of 20m ³	
Covers use under typical household ventilation.	

Product categories	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Fertilizers Lawn and garden preparations	Covers concentrations up to 4%
	Covers use up to 365 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, assumes swallowed amount of 0.3 g
	For each use event, covers use amounts up to 50 g

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	Covers use in room size of 20m ³
	Covers exposure up to 0.50 hours/event
Plant protection products	Covers concentrations up to 42.5%
	Covers use up to 365 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 857.50 cm ²
	For each use event, assumes swallowed amount of 0.3 g
	For each use event, covers use amounts up to 50 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.50 hours/event

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 - Environment
No exposure assessment presented for the environment.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	

Section 4.2 - Environment
No exposure assessment presented for the environment.

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Exposure scenario – consumer

SECTION 1	TITLE EXPOSURE SCENARIO
Title	ES20: Use as a fuel - consumer
Use descriptor	Sector of use: SU 21 Product categories: PC13 Environmental release categories: ERC 9A, ERC 9B
Scope of the process	Covers consumer uses in liquid fuels.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Additional information	No exposure assessment presented for the environment.

Section 2.1	Control of consumer exposure
Product characteristic	
Physical form of the product	Liquid, vapour pressure > 10 Pa at STP
Concentration of substance in product.	Unless otherwise indicated.
	Covers concentrations up to (%): 100%
Amounts used	
Unless otherwise indicated.	
For each use event, covers use amounts up to (g):	37,500
Covers skin contact area up to (cm ²):	420
Frequency and duration of use/exposure	
Unless otherwise indicated.	
Covers use up to (times/day of use):	0.143
Covers use up to (hours/event):	2
Other given operational conditions affecting user exposure	
Unless otherwise indicated.	
Covers use at ambient temperatures. Covers use in room size of 20m ³	
Covers use under typical household ventilation.	

Product categories	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES
Fuels Liquid: Automotive refuelling	Covers concentrations up to 100%
	Covers use up to 52 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 210.00 cm ²
	For each use event, covers use amounts up to 37,500 g
	Covers outdoor use.
	Covers use in room size of 100 m ³
	Covers exposure up to 0.05 hours/event

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Fuels Liquid: scooter refuelling	Covers concentrations up to 100%
	Covers use up to 52 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 210.00 cm ²
	For each use event, covers use amounts up to 3,750 g
	Covers outdoor use.
	Covers use in room size of 100 m ³
	Covers exposure up to 0.03 hours/event
Fuels Liquid: Garden equipment - use	Covers concentrations up to 100%
	Covers use up to 26 days/year
	Covers use up to 1 time/day
	For each use event, covers use amounts up to 750 g
	Covers outdoor use.
	Covers use in room size of 100 m ³
	Covers exposure up to 2.00 hours/event
Fuels Liquid: Garden equipment - refuelling	Covers concentrations up to 100%
	Covers use up to 26 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 420.00 cm ²
	For each use event, covers use amounts up to 750 g
	Covers use in a one car garage (34 m ³) under typical ventilation.
	Covers use in room size of 34 m ³
	Covers exposure up to 0.03 hours/event
Fuels Liquid: Lamp oil	Covers concentrations up to 100%
	Covers use up to 52 days/year
	Covers use up to 1 time/day
	Covers skin contact area up to 210.00 cm ³
	For each use event, covers use amounts up to 100 g
	Covers use in room size of 20m ³
	Covers exposure up to 0.01 hours/event

Section 2.2	Environmental exposure controls
No exposure assessment presented for the environment.	

SECTION 3	EXPOSURE ESTIMATION
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 - Environment	
No exposure assessment presented for the environment.	

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE
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Annex to the extended Safety Data Sheet (eSDS)

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EXPOSURE SCENARIO	
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, users should ensure that risks are managed to at least equivalent levels.	
Section 4.2 - Environment	
No exposure assessment presented for the environment.	