Obchodní název výrobku:: KG 30.2

Výrobek c.: 6377

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1.Identifikacelátky/směsiaspolečnosti/podniku

1.1 Identifikátor výrobku

Obchodní název výrobku KG 30.2

REACH-registrační číslo 01-2119488894-16-0000

1.2 Příslušná určená použití látky nebo směsi a nedoporučená použití

Relevantní identifikovaná použití Tepelné zpracování oceli.

Jen k průmyslovému použití.

Doporučená omezení Není známo.

1.3 Podrobné údaje o dodavateli bezpečnostního listu adresa HEF-Durferrit s.r.o.

Lomená 66

25070 Panenské Břežany telefon: +420 724 913 837 fax: +420 226 013 275 E-mail: info@hef-durferrit.cz

Odpovědná osoba Product-Safety@hef-durferrit.com

1.4 Telefonní číslo pro naléhavé situace

Telefonní číslo pro nouzové volání výrobce: +49 6132-84463

Toxikologické informační středisko. +420 224 91 92 93

2.Identifikacenebezpečnosti

2.1 Klasifikace látky nebo

směsi Produkt není klasifikován jako nebezpečný podle nařízení (ES) č. 1272/2008

Klasifikace podle předpisu (ES) (CLP).

č.1272/2008

lastrikace podre preupisu (ES)

2.2 Prvky označení

Označení podle ustanovení (EG)

č.1272/2008 (CLP)

Dle nařízení (ES) č. 1272/2008 [CLP] se produkt nemusí označovat.

2.3 Další nebezpečnost

Bezpečnostní opatření pro ochranu

osob a životního prostředí

Styk s horkým produktem způsobí tepelné popáleniny.

Za určitých okolností (např. vzdušná vlhkost) se může materiál sám od sebe

zahřát. Zvýšení vlhkosti napomáhá samo ohřátí.

3.Složení/informaceosložkách

3.2 Směsi

Chemická charakteristika

Granulát na bázi uhlíku.

Nebezpečné složky

obsažená látka		klasifikace 1272/2008/ES	koncentrace
Aktivní uhlí	ČÍSIO CAS: 7440-44-0 C. EC: 931-328-0 ČÍSIO REACH: 01-2119488894-16-0000		>= 94.0 hmot.%

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4. Pokyny proprvní pomoc

4.1 Popis první pomoci

* Všeobecné pokyny Vlastní ochrana osoby poskytující první pomoc.

Při vdechnutí Jděte na čerstvý vzduch. Pokud se vyvine a přetrvává podráždění, volejte

lékaře.

Při styku s kůží Kontaminovaný oděv svlékněte. Omyjte vodou a mýdlem. Pokud podráždění

kůže nebo vyrážka přetrvává, vyhledejte lékařskou pomoc/radu.

Při styku s očima Zvedněte oční víčka a vyplachujte oči velkým množstvím vody nejméně 15

minut. Zajistěte lékařské ošetření.

Vyplachujte ústa a dejte vypít velké množství vody. Při přetrvávajících potížích Při požití

přivolejte lékaře.

* Pokyny pro lékaře Symptomatické ošetření.

4.2 Nejdůležitější akutní a opožděné symptomy a účinky

U citlivých osob může dojít k podráždění očí anebo pokožky. Symptomy

5. Opatření prohašení požáru

5 1 Hasiya

Vhodné hasící prostředky Sprchový proud vody, Pěna, Suchý prášek, Hasicí prášek

Opatření při požáru mají odpovídat okolním podmínkám.

zahřát. Zvýšení vlhkosti napomáhá samo ohřátí.

Hasící prostředky nevhodné z

bezpečnostních důvodů

V kalírnách: Plný proud vody. Vodní proud se nesmí dostat do roztavené soli!!

Za určitých okolností (např. vzdušná vlhkost) se může materiál sám od sebe

Při požáru mohou vznikat nebezpečné rozkladné produkty jako: Oxid

5.2 Zvláštní nebezpečnost vyplývající z látky nebo směsi

* Zvláštní nebezpečí při expozici.

vyvolané látkou nebo přípravkem jako takovým, produkty jejich

spalování nebo uvolňovanými

uhelnatý (CO), Oxid uhličitý (CO2) Při hoření může uvolňovat nebezpečné výpary. plyny

5.3 Pokyny pro hasiče

Zvláštní ochranná výstroj při

hasebním zásahu

prostředí

Nezůstávejte v ohrožené oblasti bez dýchacího přístroje s vlastním

okruhem. Zabraňte kontaktu s pokožkou, držte se v patřičné vzdálenosti a

noste ochranné pracovní oděvy.

6. Opatření vpřípadě náhodného úniku

6.1 Opatření na ochranu osob, ochranné prostředky a nouzové postupy

* Osobní ochrana Zabraňte vznikání prachu. Nevdechujte prach. Zamezte kontaktu s látkou.

Zajistěte dostatečné větrání, zvláště v uzavřených prostorách.

Používejte vhodné ochranné prostředky.

6.2 Opatření na ochranu životního prostředí

Opatření k ochraně životního

Nenechejte vniknout do povrchových vod nebo kanalizace.

6.3 Metody a materiál pro omezení úniku a pro čištění

* Způsoby čištění Je nutno vyloučit vznik prachu. Zameť te, odsajte uniknuvší materiál a

přeneste do vhodného kontejneru k zneškodnění. Není-li možná recyklace, zlikvidujte v souladu s místními předpisy. Po očištění spláchněte zbytky

vodou.

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6.4 Odkaz na jiné oddíly

Odkaz na jiné odstavce Osobní ochrana viz sekce 8. Pokyny k likvidaci: viz oddíl 13

7.Zacházení askladování

7.1 Opatření pro bezpečné zacházení

* Pokyny pro bezpečné zacházení Je nutno vyloučit vznik prachu. Nevdechujte prach. Zamezte kontaktu s

> látkou. Neponechávejte v blízkosti plamenů, horkých povrchů a zápalných zdrojů. Chraňte před vlhkostí. Zajistěte dostatečné větrání, zvláště v

uzavřených prostorách.

V případě nedostatečného větrání používejte vybavení pro ochranu dýchacích cest. Používejte vhodné ochranné prostředky. Osobní ochrana viz sekce 8. Nejezte, nepijte a nekuřte při používání. Před přestávkou a po práci umýt

ruce.

* Pokyny pro ochranu před požárem a výbuchem

Zápalné látky. Uchovávejte mimo dosah zdrojů zapálení. Zabraňte vznikání

prachu.

7.2 Podmínky pro bezpečné skladování látek a směsí včetně neslučitelných látek a směsí

Požadavky na skladovací prostory a

nádrže

Uchovávejte v souladu s místními předpisy. Je třeba dbát na úřední povolení a

předpisy pro skladování.

Materiály nevhodné k uložení do

konteinerů

Není známo.

* Pokyny pro společné skladování

Neskladujte společně s oxidačními a samozápalnými produkty.

Nesnáší se se silnými kyselinami a oxidačními činidly.

* Pokyny ke skladování

Skladujte v původních obalech. Skladujte na dobře větraném místě. Skladujte na suchém místě. Chránit před vysokými teplotami a přímým slunečním zářením. Chraňte před vlhkostí. Uchovávat mimo dosah tepelných zdrojů

(např. horkých ploch), jisker a otevřeného ohně.

* TRGS 510

Granulát. V suchém stavu: 11 - Hořlavé pevné látky, které nelze přiřadit k

žádné z výše uvedených skladovacích tříd

* Doporučená skladovací teplota

Chránit před vysokými teplotami a přímým slunečním zářením.

8. Omezování expozice/osobníochranné prostředky

8.1 Kontrolní parametry

Aktivní uhlí

DNEL

Hodnota	Skupina	Postup expozice	Frekvence expozice	Zdroj
1,84 mg/mí	Pracovníci	Vdechování	DNEL dlouhodobé	151
			inhalativní (lokálně)	
0,9 mg/mí	Spotřebitelé	Vdechování	DNEL dlouhodobé	151
			inhalativní (lokálně)	

Zdroj: 151 - ECHA

PNFC

Hodnota	Postup expozice	Zdroj
10 mg/kg	Půda	151

Zdroj: 151 - ECHA

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8.2 Omezování expozice

Ochrana dýchacích orgánů Při nedostatečném větrání použijte dýchací přístroj. Doporučený typ filtru:

Polomaska s filtrem proti mechanickým částicím P2 (evropská norma EN 143).

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například FFP2

Ochrana rukou Ochranné rukavice doporučeno: například Kožené rukavice, Pryžové rukavice

Poznámky: Při manipulaci s horkým materiálem použijte tepelně izolující rukavice.

Pracovní oděv nesmí být zhotoven z materiálu, který při požáru vytváří

nebezpečnou taveninu.

Ochrana očí V prašném prostření noste ochranné brýle. Ochranné brýle s bočními kryty

vyhovující normě EN166.

Ochrana kůže a těla Pracovní oděv s dlouhými rukávy

Všeobecná bezpečnostní a

hygienická opatření

V místě použití by mělo být zakázáno kouřit, jíst a pít. Před pracovní

přestávkou a po skončení práce si umyjte ruce.

Technická opatření V pracovních prostorách je nutno zajistit dostatečnou výměnu vzduchu

a/nebo odsávání.

9.Fyzikální achemické vlastnosti

9.1 Informace o základních fyzikálních a chemických vlastnostech

Skupenství pevný Vzhled granulát Barva černý

Zápach bez zápachu
Prahová hodnota pro vnímání data neudána

zápachu

pH asi 9 – 11 (rozmíchejte ve vodě)

* Bod tání [°C] / Bod tuhnutí [°C] > 1000 * počáteční bod varu [°C] a rozmezí > 1000

bodu varu [°C]

* Bod vzplanutí [°C] Nepoužitelný. Rychlost odpařování [kg/(s*m2)] data neudána

* Hořlavost (pevné látky, plyny) Hořlavý

Tlak par [kPa] data neudána

Hustota par Žádné údaje k dispozici

* Hustota [g/cm3] asi 1,45 - 1,6

* Rozpustnost ve vodě [g/l] nerozpustná látka (hodnota pH 6,8; 20 °C)

Způsob měření: OECD 105

* Rozdělovací koeficient n- data neudána. Produkt / substance je anorganický. oktanol/voda (log P O/W)

Teplota samovznícení Zvýšení vlhkosti napomáhá samo ohřátí.

Teplota rozkladu [°C] data neudána

* Dynamická viskozita [kg/(m*s)] Nepoužitelný.

* výbušné vlastnosti Granulát: Nevýbušný

Oxidační vlastnosti Nemá zápalné (oxidační) účinky.

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9.2 Další informace

* Teplota vznícení [°C] asi 350 - 450 * Sypná měrná hmotnost [kg/m3] asi 550 - 600

10.Stálost areaktivita

10.1 Reaktivita

* Reaktivita Při řádné manipulaci a skladování nedochází k žádným nebezpečným

reakcím.

10.2 Chemická stabilita

Chemická stabilita Stabilní za doporučených skladovacích podmínek.

10.3 Možnost nebezpečných reakcí

Za určitých okolností (např. vzdušná vlhkost) se může materiál sám od sebe Nebezpečné reakce

> zahřát. Zvýšení vlhkosti napomáhá samo ohřátí. Exotermní reakce s: Oxidační činidla (silná) Rozkládá se při reakci se silnými kyselinami.

10.4 Podmínky, kterým je třeba zabránit

Extrémní teploty a přímé sluneční záření. Nutno zabránit těmto podmínkám

Vystavení vlivu vlhkosti.

10.5 Neslučitelné materiály

Oxidující a samozápalné výrobky Nutno zabránit styku s těmito Silné kyseliny a oxidační prostředky látkami

10.6 Nebezpečné produkty rozkladu

Nebezpečné produkty rozkladu Oxid uhelnatý (CO), Oxid uhličitý (CO2)

11.Toxikologické informace

11.1 Informace o toxikologických účincích

Nebezpečné složky

Aktivní uhlí

Orální toxicita [mg/kg]	Testovací kritérium	Druh zkoušky	Způsob měření	Zdroj
>2000	LD50	krysa	OECD 423	151

Zdroj: 151 - ECHA

Dermální toxicita [mg/kg]	Hodnota	Zdroj
-	Žádné údaje k dispozici	151

Zdroj: 151 - ECHA

Inhalativní toxicita [mg/ I]	Testovací kritérium	Druh zkoušky	Způsob měření	Zdroj
>8,5	LC50	krysa	OECD 403	151

Zdroj: 151 - ECHA

Dráždivý účinek na kůži Test na podráždění pokožky (králík): Není dráždivý.

Doba expozice: 4 h

Způsob měření: **OECD 404**

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náznak: externí bezpečnostní list

Dráždivý účinek na oči Test na podrážděni oči (králík): Není dráždivý.

Způsob měření: OECD 405

náznak: externí bezpečnostní list

Senzibilizace Styk s kůží: nesenzibilizující.

Vdechnutí: data neudána. Žádný známý účinek.

* Karcinogenní účinky data neudána.

* Mutagenita negativní (bez aktivace látkové výměny).

Poznámky: externí bezpečnostní list

negativní (s aktivací výměny látek).

Poznámky: externí bezpečnostní list

* Toxicita pro reprodukci data neudána.

Symptomy U citlivých osob může dojít k podráždění očí anebo pokožky.

Specifická toxicita pro cílové orgány (jednorázová expozice) [mg/kg]

Specifické účinky: data neudána

Specifická toxicita pro cílové orgány (opakovaná expozice) [mg/kg]

Specifické účinky: data neudána Nebezpečnost při vdechnutí data neudána

12. Ekologické informace

12.1 Toxicita

Nebezpečné složky

Aktivní uhlí

Toxicita pro ryby [mg/l]	Hodnota	Zdroj
-	Žádné údaje k dispozici	151

Zdroj: 151 – ECHA

Toxicita pro Dafnie [mg/l]	Hodnota	Zdroj
-	Žádné údaje k dispozici	151

Zdroj: 151 – ECHA

Toxicita pro řasy [mg/l]	Hodnota	Zdroj
-	Žádné údaje k dispozici	151

Zdroj: 151 - ECHA

NOEC (ryba) [mg/l]	Hodnota	Zdroj
-	Žádné údaje k dispozici	151

Zdroj: 151 - ECHA

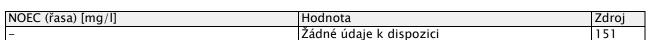
NOEC (dafnie) [mg/l]	Hodnota	Zdroj
-	Žádné údaje k dispozici	151

Zdroj: 151 - ECHA

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Zdroj: 151 - ECHA

12.2 Perzistence a rozložitelnost

Biologická rozložitelnost data neudána. Metody stanovení biologické odbouratelnosti nejsou

aplikovatelné pro anorganické látky.

12.3 Bioakumulační potenciál

* Bioakumulace je nepravděpodobná.

Biokoncentrační faktor (BCF) Biokoncentrační faktor (BCF) < 10 (externí bezpečnostní list)

12.4 Mobilita v půdě

Rozložení v životním prostředí data neudána.

Mobilita Žádné údaje k dispozici.

12.5 Výsledky posouzení PBT a vPvB

Výsledek zjišť ování vlastností PBT Směs neobsahuje látky PBT a vPvB.

12.6 Jiné nepříznivé účinky

Odkaz AOX Tento produkt neobsahuje podle receptury žádné organicky vázané halogeny

(AOX).

13. Pokyny proodstraňování

13.1 Metody nakládání s odpady

Pokyny pro likvidaci Nespotřebovaný produkt není nebezpečným odpadem ve smyslu evropského

katalogu odpadů.

Podle Evropského katalogu odpadů nejsou kódy odpadů charakteristické pro produkt, nýbrž pro jeho použití. Kódy odpadů by měl přidělovat uživatel na

základě použité aplikace výrobku.

Následující kódy odpadů jsou pouze návrhy:

* Katalogové číslo odpadu 06 13 02* Upotřebené aktivní uhlí (kromě odpadu uvedeného pod číslem 06

7 02)

15 02 02* Absorpční činidla, filtrační materiály (včetně olejových filtrů jinak blíže neurčených), čisticí tkaniny a ochranné oděvy znečištěné nebezpečnými

látkami

15 02 03 Absorpční činidla, filtrační materiály, čisticí tkaniny a ochranné

oděvy neuvedené pod číslem 15 02 02

14.Informace propřepravu

	* Pozemní doprava ADR/	* Námořní přeprava IMDG	Letecká doprava ICAO/IA-
	RID		TA
14.2 Oficiální (OSN) po-	Bezpečné zboží	Bezpečné zboží	Bezpečné zboží
jmenování pro přepravu			
Poznámky	Balení ≤ 3 m³	Balení ≤ 3 m³	

15.Informace opředpisech

15.1 Předpisy týkající se bezpečnosti, zdraví a životního prostředí/specifické právní předpisy týkající se látky nebo směsi

Informace o bezpečnosti produktu Obchodní název výrobku:: KG 30.2 Výrobek c.: 6377

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* Další předpisy

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15.2 Posouzení chemické bezpečnosti

Posouzení bezpečnosti Pro tuto látku bylo provedeno posouzení chemické bezpečnosti.

16.Další informace

* Změna vůči poslednímu znění ODDÍL 3: Složení/ informace o složkách

ODDÍL 4: Pokyny pro první pomoc ODDÍL 5: Opatření pro hašení požáru

ODDÍL 6: Opatření v případě náhodného úniku

ODDÍL 7: Zacházení a skladování

ODDÍL 8: Omezování expozice/osobní ochranné prostředky

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ODDÍL 9: Fyzikální a chemické vlastnosti

ODDÍL 10: Stálost a reaktivita ODDÍL 11: Toxikologické informace ODDÍL 12: Ekologické informace ODDÍL 13: Pokyny pro odstraňování ODDÍL 14: Informace pro přepravu ODDÍL 15: Informace o předpisech

ODDÍL 16: Další informace

Zkratky a akronymy Odvozená hladina bez účinku (DNEC)

Předpokládaná koncentrace bez účinku (PNEC) NOEC (no observed effect concentration) (NOEC) Adsorbované organicky vázané halogeny (AOX) Obsah organické těkavé sloučeniny (VOC)

Evropský katalog odpadů (EAK) Třída ohrožení vod (WGK)

* Důležité literární údaje a prameny

dat

Třídění podle nařízení (ES) č.1272/2008 [CLP]

Bezpečnostní informace dle Nařízení (ES) č. 1907/2006 (REACH), Článku 32

Evropský katalog odpadů

Doporučená omezení Není známo.

Nepovinný bezpečnostní údaj podle dikce bezpečnostního listu v souladu s Nařízením (ES) č. 1907/2006 (REACH) Obsažené údaje odpovídají současnému stavu našich znalostí a nejsou proto zárukou určitých vlastností.

Změny oproti poslední verzi jsou označeny s*.

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)

Annex I: Overview of risk management measures

Trade name: KG 30.2

Extruded carbon Version: 2.0
Up-stream product of water-steam activated carbon Revision date: 11-01-2013

Up-stream product of water-steam activated carbon
APPENDIX I: OVERVIEW OF RISK MANAGEMENT MEASURES

Included life cycles (overview of uses covered is presented in annex II)

The following life cycle stages are included in this Chemical safety report:

- C_I Manufacture of the substance (IU# C1 through C12). Includes recycling/ recovery, material
 transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and
 bulk container), sampling, associated laboratory activities, maintenance and cleaning of
 equipment
- B_I Formulation (IU# B1 through B15), 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 cleaning of equipment
- A_I Industrial end-use (IU# A1 through A17) as a component in a preparation including transfer from storage, pouring/unloading from drums or containers in batch or continuous operations, including storage, materials transfers, sampling.
- D_P Covers the professional use (DU# D1 through D20) as a component in a preparation including pouring/unloading from bags, drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities.
- E_C Covers general exposures to consumers (DU# E1 through E6, C7 and C8) arising from the use of household products sold as filter products.

Consumer operational conditions and risk management measures

Normal use of AC - HDS in household products sold as filter products is safe under all foreseeable circumstances.

Environmental scenarios

There are no hazards potentially requiring control of risk related to environmental endpoints. This also supports the conclusion that there is no need to assess the indirect exposure of man via the environment through the oral route.

Indirect exposure of humans via the environment

The indirect exposure of man via ambient air (e.g. in the neighborhood of sites where a substance is manufactured or used) is not evaluated although it can not be excluded. In the Chemical Safety Assessment only systemic effects need to be considered. AC - HDS does not cause acute or long-term systemic effects.

Risk management measures applicable for worker scenarios

The risk management measures applicable for worker scenarios are listed in the generic exposure scenarios of Annex II.

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APPENDIX II GENERIC EXPOSURE SCENARIOS & ESTIMATED CONSUMER EXPOSURES

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Table 10 Consumer uses of powdered activated carbon	26

Risk management measure		Assumed effectiveness ¹			Source of effectiveness
		Inhalatory		Dermal	
Technical Risk	management m	neasures		ľ	125.011
General ventila	tion	50%		-	Advanced REACH tool
(mechanical)					(www.advancedreachtool.com).
	DD00000	Industrial	Professional	000/	1054011
Local exhaust ventilation	PROC 2, 3, 4, 5, 6, 8a, 9, 10, 13, 15, 15, 16, 19. 21, 23, 25	90%	80%	30%	Advanced REACH tool (www.advancedreachtool.com) for the inhalatory effectiveness, the dermal effectiveness is assumed to be 1/3 of the inhalatory effectiveness.
	PROC 7	95%	n.a.		
	PROC 8b	95%	80%		
	PROC 11, 20	n.a.	80%		
	PROC 17, 18	90%	90%		
	PROC 22	90%	n.a.		
	PROC 24	90%	75%		
Laminar flow bo	ootn	90%	90%	30%	Advanced REACH tool (www.advancedreachtool.com) for the inhalatory effectiveness, the dermal effectiveness is assumed to be 1/3 of the inhalatory effectiveness.
			e, Reduction of d		xposure
> 60 and <= 24 shift	·	40%		40%	ECETOC TRA (http://www.ecetoc.org/tra) for the inhalatory effectiveness,
> 15 and <= 60 shift	·	80%		80%	expert judgment for dermal effectiveness.
<= 15 minutes per shift		90%		80%	
			oncentration of s		
> 5% and <= 25		40%		75%	ECETOC TRA (http://www.ecetoc.org/tra)
> 1% and <= 59	%	80%		95%	for the inhalatory effectiveness, expert judgment for dermal effectiveness.
<= 1%	ativa aguines se	90%		99%	judgment for definal effectiveness.
Respirator (We	ective equipment	95%		n.a.	ECETOC TRA (http://www.ecetoc.org/tra)
respirator confo with Type A / F APF >20))	orming to EN140 22 filter or better.			n.a.	EGETOG TICA (IIIIp.//www.egetoc.org/iia)
Respirator (We- (half face mask EN140 with Typ filter or better. A) conforming to be A filter / P2	90%		n.a.	ECETOC TRA (http://www.ecetoc.org/tra)

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 $^{^{1}}$ All effectiveness's listed are only valid if the RMM is properly designed, installed (if applicable), used and maintained.

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maintenance and cleaning of equipment	sel/barge, road/rail car and bulk container), sampling, associate	ed laboratory activities,	
Based on ECHA Template CSA&IR Part D draft	Version 2, combined with the GES Narrative Format		
Section 1	Exposure Scenario Title		
Title	Manufacture of Activated Carbon, High Density Skeleton, non powdered / wetted		
Jse Descriptors Sectors of Use: Industrial (SU 3) Proces Categories: PROC 1, PROC2, PROC3, PROC4, PROC8a, PROC 8b, PROC1			
Scenarios covered	NPAC C1 through C12. Includes recycling/ recovery, material tra	ansfers storage maintenance and	
occination covered	loading (including marine vessel/barge, road/rail car and bulk container), sampling, associated laboratory activities, maintenance and cleaning of equipment		
Section 2	Operational conditions and risk management measures		
Section 2.1	Control of worker exposure		
Product characteristics and operational	Control of World Capabate		
conditions			
Physical form of product	Solid, low dustiness (OC1)		
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless s	tated differently) [G13].	
Amounts used	Uses covered ranging from ml up to m ³ s	,, [].	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [0	7 21	
Human factors not influenced by risk	Not applicable	32]	
management	1 vot applicable		
Other Operational Conditions affecting worker	Assumes activities are at ambient temperature (unless stated diffe	rently) [G17]	
exposure	Indoor (OC8).	rentry). [G17].	
exposure	Outdoor (OC 9).		
Contributing Scenarios	Risk Management Measures	Risk Charactization Ratios (RCR)	
contributing Section is	Note: list RMM standard phrases according to the control	Risk Charactization Ratios (RCR)	
	hierarchy indicated in the ECHA template: 1. Technical		
	measures to prevent release, 2. Technical measures to prevent		
	dispersion, 3. Organizational measures, 4. Personal protection.		
	Phrases between brackets are good practice advice only,		
	beyond REACH Chemical Safety Assessment and may be		
	communicated in Section 5 of the ES or within the main		
	sections of the SDS.		
	Unless stated otherwise all listed measures are required to achieve safe use		
ATRICCI PROCLI II III I I I		0.002	
NPAC.C1 : PROC 1 : Handling in closed	Assumes a good basic standard of occupational hygiene is	0.003	
system, no sampling required e.g. kiln	implemented [G1].		
processes, milling, closed mechanic or			
pneumatic transfer between process equipment,			
silo			
NPAC.C1w: PROC 1: Moist or slurry (no	Assumes a good basic standard of occupational hygiene is	0.003	
dust): Handling in closed system, no sampling	implemented [G1].		
hydrolic transfer between process equipment			
hydrolic transfer between process equipment NPAC.C2 : PROC 2 : Handling in closed	Assumes a good basic standard of occupational hygiene is	0.003	
required e.g. washing, closed mechanic or hydrolic transfer between process equipment NPAC.C2: PROC 2: Handling in closed continuous system, sampling required, e.g.	Assumes a good basic standard of occupational hygiene is implemented [G1].	0.003	
hydrolic transfer between process equipment NPAC.C2 : PROC 2 : Handling in closed continuous system, sampling required, e.g. closed mechanic or pneumatic transfer between		0.003	
hydrolic transfer between process equipment NPAC.C2: PROC 2: Handling in closed continuous system, sampling required, e.g. closed mechanic or pneumatic transfer between process equipment with sampling	implemented [G1].		
hydrolic transfer between process equipment NPAC.C2: PROC 2: Handling in closed continuous system, sampling required, e.g. closed mechanic or pneumatic transfer between process equipment with sampling NPAC.C2w: PROC 2: Moist or slurry (no	implemented [G1]. Assumes a good basic standard of occupational hygiene is	0.003	
hydrolic transfer between process equipment NPAC.C2: PROC 2: Handling in closed continuous system, sampling required, e.g. closed mechanic or pneumatic transfer between process equipment with sampling NPAC.C2w: PROC 2: Moist or slurry (no dust): Handling in closed continuous system,	implemented [G1].		
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Safety Data Sheet

5.2 Environment

according to Regulation (EC) No 1907/2006 (REACH)

Annex II: List of exposure scenarios covered KG 30.2

Extruded carbon Version: 2.0
Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Manufacture of Activated Carbon, High Density Skeleton (IU# C1 through C12). Includes recycling/recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling, associated laboratory activities, maintenance and cleaning of equipment

Based on ECHA Template CSA&IR Part D draft Version 2, combined with the GES Narrative Format bags/containers of non powdered materials in implemented [G1]. non dedicated facilities without dust removal system in place NPAC.C9 : PROC 8a : Sampling of dry Assumes a good basic standard of occupational hygiene is 0.167 activated carbon in non-dedicated facilities implemented [G1]. NPAC.C10: PROC 4: Maintenance, working Assumes a good basic standard of occupational hygiene is 0.167 in or at opened installations or installation implemented [G1]. components (emptied before start of work) NPAC.C11: PROC 4: Cleaning of equipment Assumes a good basic standard of occupational hygiene is 0.167 implemented [G1]. NPAC.C12: PROC 22: Potentially closed Assumes a good basic standard of occupational hygiene is 0.033 processing operations with minerals/metals at implemented [G1]. elevated temperatures. Section 2.2 Control of environmental exposure There are no hazards potentially requiring control of risk related to environmental endpoints. This also Product characteristics supports the conclusion that there is no need to assess the indirect exposure of man via the environment through the oral route. **Exposure Estimation** Section 3 3.1 Human Health Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workplace exposures unless otherwise indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed with the DNEL (2 mg/m³). 3.2 Environment As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborhood of sites where a substance is manufactured or used) is not evaluated although it can not be excluded. In the Chemical Safety Assessment only systemic effects need to be considered. AC - HDS does not cause acute or long-term systemic effects. Guidance to check compliance with the exposure scenarios Section 4 4.1 Health Page 1 of appendix 2 provides a table which can be used to check compliance with the exposure Effectiveness of RMMs and workplace exposure levels can be assess using proper industrial hygiene techniques. 4.2 Environment Not applicable based on absence of hazard. Section 5 Other information 5.1 Human Health Low oxygen work procedure - Wet activated carbon depletes oxygen from air and, therefore,

low oxygen areas should be followed.

dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessels oxygen content should be determined and work procedures for potentially

Spent activated carbon may contain contaminants which require is the following: Dispose of waste or used sacks/containers according to local regulations [ENVT10].

KG 30.2

Extruded carbon Version: 2.0 Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Manufacture of Activated Carbon, High Densi Based on ECHA Template CSA&IR Part D draft	ty Skeleton (powdered) Version 2, combined with the GES Narrative Format		
Section 1	Exposure Scenario Title		
Title	Manufacture of Activated Carbon, High Density Skeleton, powdered		
Use Descriptors	Sectors of Use: Industrial (SU3)		
•	Proces Categories: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC 8b, PROC15, PROC		
	Environmental Release Categories: ERC 1		
Scenarios covered	PAC C1 through C12. Includes recycling/ recovery, material trans		
	loading (including marine vessel/barge, road/rail car and bulk container), sampling, associated		
	laboratory activities, maintenance and cleaning of equipment		
Section 2	Operational conditions and risk management measures		
Section 2.1	Control of worker exposure		
Product characteristics and operational conditions			
Physical form of product	Solid, high dustiness [OC6].		
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless s	stated differently) [G13]	
Amounts used	Uses covered ranging from ml up to m ³ s	nated uniforenity) [G13].	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [9]	G21	
Human factors not influenced by risk	Not applicable	,	
management	**		
Other Operational Conditions affecting worker	Assumes activities are at ambient temperature (unless stated diffe		
exposure	Assumes a good basic standard of occupational hygiene is imple	mented [G1].	
	Indoor (OC8).		
	Outdoor (OC 9).	D:10	
Contributing Scenarios	Risk Management Measures Note: list RMM standard phrases according to the control	Risk Charactization Ratios (RCR)	
	hierarchy indicated in the ECHA template: 1. Technical		
	measures to prevent release, 2. Technical measures to prevent		
	dispersion, 3. Organizational measures , 4. Personal protection.		
	Phrases between brackets are good practice advice only,		
	beyond REACH Chemical Safety Assessment and may be		
	communicated in Section 5 of the ES or within the main		
	sections of the SDS.		
	Unless stated otherwise all listed measures are required to		
	achieve safe use		
PAC.C1 & PAC.C1 : PROC 1: Handling in	No specific measures identified [EI18].	0.003	
closed system, no sampling required e.g.			
milling, closed mechanic or pneumatic transfer			
between process equipment, silo PAC.C2 : PROC 2 : Handling in closed	No specific measures identified [EI18].	0.333	
continuous system, sampling required, e.g.	No specific measures identified [Eff6].	0.555	
closed mechanic or pneumatic transfer between			
process equipment with sampling			
PAC.C2w : PROC 2 : Handling in closed	No specific measures identified [EI18].	0.003	
continuous system, sampling required, e.g.			
closed mechanic or pneumatic transfer between			
process equipment with sampling			
PAC.C3 : PROC 3 : Handling in closed batch	No specific measures identified [EI18].	0.333	
system, sampling required e.g. blending, closed			
mechanic or pneumatic transfer between			
process equipment with sampling, sampling from silo			
PAC.C3w : PROC 3 : Handling in closed batch	No specific measures identified [EI18].	0.033	
system, sampling required e.g. blending, closed	1.0 specific measures identified [Difo].		
mechanic or pneumatic transfer between			
process equipment with sampling, sampling			
from silo			
PAC.C4w: PROC 4: Moist or slurry (no dust):	No specific measures identified [EI18].	0.167	
Handling in system with opportunity for			
exposure e.g. washing, open mechanic transport			
between process equipment		0.145	
PAC.C5 : PROC 8a : Coupling and uncloupling	Provide extract ventilation to points where emissions occur	0.167	
of flexible hose	[E54].		
	Provide extract ventilation to material transfer points and other		
	openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter		
	or better {PPE29]	i	

KG 30.2

Extruded carbon Version: 2.0 Revision date: 11-01-2013 Up-stream product of water-steam activated carbon:

Manufacture of Activated Carbon, High Densi	ty Skeleton (powdered)		
	Version 2, combined with the GES Narrative Format		
PAC.C6 : PROC 8b : Sampling and charging /	Provide extract ventilation to points where emissions occur	0.417	
discharging bags/containers of powdered	[E54].	0.117	
materials in dedicated facilities with appropriate	Provide extract ventilation to material transfer points and other		
RMM's in place	openings [E82].		
Turning in place	If above technical control measures are not feasible, then adopt		
	following PPE: [PPE30].		
	Wear a respirator conforming to EN140 with Type A/P2 filter		
	or better {PPE29]		
	Use dedicated equipment [E85].		
PAC.C7 : PROC 8a : Charging / discharging	Provide extract ventilation to points where emissions occur	0.167	
bags/containers of powdered materials in non	[E54].	0.107	
dedicated facilities without dust removal system	Provide extract ventilation to material transfer points and other		
in place	openings [E82].		
PAC.C8 : PROC 8a : Sampling bags/containers	Wear a respirator conforming to EN140 with Type A/P2 filter		
of powdered materials in non dedicated	or better {PPE29]		
facilities without dust removal system in place	of setter (11 E25)		
PAC.C9 : PROC 4 : Maintenance, working in or	Provide extract ventilation to points where emissions occur	0.833	
at opened installations or installation	[E54].	0.000	
components (emptied before start of work)	Provide extract ventilation to material transfer points and other		
(empires service state of work)	openings [E82].		
PAC.C10 : PROC 4 : Cleaning of equipment	If above technical control measures are not feasible, then adopt		
Triesers (Triese) Coloming of equipment	following PPE: [PPE30].		
	Wear a respirator conforming to EN140 with Type A/P2 filter		
	or better {PPE29]		
PAC.C11 : PROC 22 : Potentially closed	No specific measures identified [EI18].	0.333	
processing operations with minerals/metals at	The specific measures radiimed (Erroj)	0.000	
elevated temperatures.			
Section 2.2	Control of environmental exposure		
Product characteristics	There are no hazards potentially requiring control of risk related to environmental endpoints. This also		
	supports the conclusion that there is no need to assess the indirect		
	through the oral route.		
Section 3	Exposure Estimation		
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNEI	s when the identified risk	
	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8)	s when the identified risk	
	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp		
	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8)		
	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed.	lace exposures unless otherwise	
	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed As no hazards are present, no exposure estimation is needed.	lace exposures unless otherwise and with the DNEL (2 mg/m³).	
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor management of the property	lace exposures unless otherwise and with the DNEL (2 mg/m³).	
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor manufactured or used) is not evaluated although it can not be exceeded.	lace exposures unless otherwise and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety	
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor manufactured or used) is not evaluated although it can not be exceed assessment only systemic effects need to be considered. AC - HI	lace exposures unless otherwise and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety	
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor manufactured or used) is not evaluated although it can not be exceeded.	lace exposures unless otherwise and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety	
3.1 Human Health 3.2 Environment Section 4	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborn manufactured or used) is not evaluated although it can not be exceed assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios	and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term	
3.1 Human Health 3.2 Environment	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborn manufactured or used) is not evaluated although it can not be exceed assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios Page 1 of appendix 2 provides a table which can be used to check	and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term	
3.1 Human Health 3.2 Environment Section 4	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor manufactured or used) is not evaluated although it can not be exceeded assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios.	and a compliance with the exposure surface and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term	
3.1 Human Health 3.2 Environment Section 4	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor manufactured or used) is not evaluated although it can not be exceeded assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be as	and a compliance with the exposure surface and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term	
3.1 Human Health 3.2 Environment Section 4 4.1 Health	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor manufactured or used) is not evaluated although it can not be exceeded assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be as techniques.	and a compliance with the exposure surface and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term	
3.1 Human Health 3.2 Environment Section 4	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor manufactured or used) is not evaluated although it can not be exceeded assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be as techniques. Not applicable based on absence of hazard.	and a compliance with the exposure surface and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term accompliance with the exposure	
3.1 Human Health 3.2 Environment Section 4 4.1 Health 4.2 Environment Section 5	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighbor manufactured or used) is not evaluated although it can not be exceeded assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be as techniques. Not applicable based on absence of hazard. Other information	add with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term a compliance with the exposure sess using proper industrial hygiene	
3.1 Human Health 3.2 Environment Section 4 4.1 Health 4.2 Environment	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborn manufactured or used) is not evaluated although it can not be exceed assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be as techniques. Not applicable based on absence of hazard. Other information Low oxygen work procedure – Wet activated carbon depletes oxygen.	lace exposures unless otherwise and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term accompliance with the exposure sess using proper industrial hygiene	
3.1 Human Health 3.2 Environment Section 4 4.1 Health 4.2 Environment Section 5	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborn manufactured or used) is not evaluated although it can not be exceed assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be as techniques. Not applicable based on absence of hazard. Other information Low oxygen work procedure – Wet activated carbon depletes oxydangerously low levels of oxygen may be encountered. Wheneve	lace exposures unless otherwise and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term accompliance with the exposure sess using proper industrial hygiene are generally from air and, therefore, reworkers enter a vessel containing	
3.1 Human Health 3.2 Environment Section 4 4.1 Health 4.2 Environment Section 5	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborn manufactured or used) is not evaluated although it can not be exceed assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be astechniques. Not applicable based on absence of hazard. Other information Low oxygen work procedure – Wet activated carbon depletes oxydangerously low levels of oxygen may be encountered. Wheneve activated carbon, the vessels oxygen content should be determine	lace exposures unless otherwise and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term accompliance with the exposure sess using proper industrial hygiene are generally from air and, therefore, reworkers enter a vessel containing	
3.1 Human Health 3.2 Environment Section 4 4.1 Health 4.2 Environment Section 5	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborn manufactured or used) is not evaluated although it can not be exceeded. Assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be as techniques. Not applicable based on absence of hazard. Other information Low oxygen work procedure – Wet activated carbon depletes oxydangerously low levels of oxygen may be encountered. Wheneve activated carbon, the vessels oxygen content should be determine low oxygen areas should be followed.	acc exposures unless otherwise and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term accompliance with the exposure sess using proper industrial hygiene Type from air and, therefore, and therefore, ar workers enter a vessel containing d and work procedures for potentially	
3.1 Human Health 3.2 Environment Section 4 4.1 Health 4.2 Environment Section 5	Estimated workplace exposures are not expected to exceed DNEI management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workp indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed. As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborn manufactured or used) is not evaluated although it can not be exceed assessment only systemic effects need to be considered. AC - HI systemic effects. Guidance to check compliance with the exposure scenarios. Page 1 of appendix 2 provides a table which can be used to check scenarios. Effectiveness of RMMs and workplace exposure levels can be astechniques. Not applicable based on absence of hazard. Other information Low oxygen work procedure – Wet activated carbon depletes oxydangerously low levels of oxygen may be encountered. Wheneve activated carbon, the vessels oxygen content should be determine	lace exposures unless otherwise and with the DNEL (2 mg/m³). Thood of sites where a substance is luded. In the Chemical Safety DS does not cause acute or long-term at compliance with the exposure sess using proper industrial hygiene and work procedures for potentially stee following:	

Annex II: List of exposure scenarios covered KG 30.2

Extruded carbon Version: 2.0 Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Table 3 Formulation of Activated Carbon, High Density Skeleton non powdered / wetted (NPAC B1 through

B15)			
	d Carbon, High Density Skeleton non powdered / wetted, Inclu		
transfers, storage, maintenance and loading (in activities, maintenance and cleaning of equipme	cluding marine vessel/barge, road/rail car and bulk container),	sampling, associated laboratory	
	Version 2, combined with the GES Narrative Format		
Section 1	Exposure Scenario Title		
Title	Formulation of Activated Carbon, High Density Skeleton, non powdered / wetted		
Use Descriptors	Sectors of Use: Industrial (SU 3) Proces Categories: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC 8b, PROC15, PROC 22 Environmental Release Categories: ERC 1		
Scenarios covered	Formulation (IU# B1 through B15), packing and re-packing of the substance and its mi		
	or continuous operations, including storage, materials transfers, r	nixing, tabletting, compression,	
	pelletisation, extrusion, large and small scale packing, sampling,	maintenance and cleaning of	
	equipment		
Section 2	Operational conditions and risk management measures		
Section 2.1	Control of worker exposure		
Product characteristics and operational			
conditions	(0.01)		
Physical form of product	Solid, low dustiness (OC1)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless s	stated differently) [G13].	
Amounts used	Uses covered ranging from ml up to m ³ s	C21	
Frequency and duration of use Human factors not influenced by risk	Covers daily exposures up to 8 hours (unless stated differently) [J2J	
Human factors not influenced by risk management	Not applicable		
Other Operational Conditions affecting worker	Assumes activities are at ambient temperature (unless stated diffe	arantly) [G17]	
exposure	Assumes a good basic standard of occupational hygiene is implet		
exposure	Indoor (OC8).	nemea [61].	
	Outdoor (OC 9).		
Contributing Scenarios	Risk Management Measures	Risk Charactization Ratios (RCR)	
	Note: list RMM standard phrases according to the control	,	
	hierarchy indicated in the ECHA template: 1. Technical		
	measures to prevent release, 2. Technical measures to prevent		
	dispersion, 3. Organizational measures, 4. Personal protection.		
	Phrases between brackets are good practice advice only,		
	beyond REACH Chemical Safety Assessment and may be		
	communicated in Section 5 of the ES or within the main		
	sections of the SDS.		
	Unless stated otherwise all listed measures are required to achieve safe use		
NDAC D1 - DDOC 1 - hdi		0.003	
NPAC.B1 : PROC 1 : handling/use in closed systems, no likelyhood of exposure;	No specific measures identified [EI18].	0.003	
e.g. Dust-free dosing systems			
NPAC.B1m : PROC 1 : Mixed with other	No specific measures identified [EI18].	0.003	
substance(s): handling/use in closed systems, no	Two specific incustres identified [E110].	0.003	
likelyhood of exposure;			
e.g. impregnation of non powdered activated in			
closed systems,			
NPAC.B2 : PROC 2 : Handling/use in closed	No specific measures identified [EI18].	0.003	
continuous system, occasional controlled			
exposure (sampling);			
e.g. Dust-free dosing systems			
NPAC.B2m : PROC 2 : Mixed with other	No specific measures identified [EI18].	0.003	
substance(s): handling/use in closed continuous			
system, occasional controlled exposure		1	
1			
(sampling);			
(sampling); e.g. impregnation of non powdered activated in			
(sampling); e.g. impregnation of non powdered activated in closed systems,	No specific massures identified (EI) 91	0.033	
(sampling); e.g. impregnation of non powdered activated in closed systems, NPAC.B3: PROC 3: Handling/use in closed	No specific measures identified [EII8].	0.033	
(sampling); e.g. impregnation of non powdered activated in closed systems, NPAC.B3: PROC 3: Handling/use in closed batch system, occasional controlled exposure	No specific measures identified [EI18].	0.033	
(sampling); e.g. impregnation of non powdered activated in closed systems, NPAC.B3: PROC 3: Handling/use in closed batch system, occasional controlled exposure (sampling);	No specific measures identified [EI18].	0.033	
(sampling); e.g. impregnation of non powdered activated in closed systems, NPAC.B3: PROC 3: Handling/use in closed batch system, occasional controlled exposure (sampling); e.g. Dust-free dosing systems			
(sampling); e.g. impregnation of non powdered activated in closed systems, NPAC.B3: PROC 3: Handling/use in closed batch system, occasional controlled exposure (sampling); e.g. Dust-free dosing systems NPAC.B3m: PROC 3: Mixed with other	No specific measures identified [EI18]. No specific measures identified [EI18].	0.033	
(sampling); e.g. impregnation of non powdered activated in closed systems, NPAC.B3: PROC 3: Handling/use in closed batch system, occasional controlled exposure (sampling); e.g. Dust-free dosing systems NPAC.B3m: PROC 3: Mixed with other substance(s): handling/use in closed batch			
(sampling); e.g. impregnation of non powdered activated in closed systems, NPAC.B3: PROC 3: Handling/use in closed batch system, occasional controlled exposure (sampling); e.g. Dust-free dosing systems			
(sampling); e.g. impregnation of non powdered activated in closed systems, NPAC.B3: PROC 3: Handling/use in closed batch system, occasional controlled exposure (sampling); e.g. Dust-free dosing systems NPAC.B3m: PROC 3: Mixed with other substance(s): handling/use in closed batch system, occasional controlled exposure			

according to Regulation (EC) No 1907/2006 (REACH)

Safety Data Sheet
Annex II: List of exposure scenarios covered KG 30.2

> **Extruded carbon** Version: 2.0

> Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling, associated laboratory activities, maintenance and cleaning of equipment Based on ECHA Template CSA&IR Part D draft Version 2, combined with the GES Narrative Format				
Based on ECHA Template CSA&IR Part D draft NPAC.B4: PROC 4: Handling/use in closed	Version 2, combined with the GES Narrative Format No specific measures identified [EI18].	0.167		
patch system, occasional controlled exposure	ino specific measures fucilified [Effo].	0.107		
emitted dust);				
e.g. impregnation of non powdered activated in				
anks, into which materials are charged, during				
which carbon dust is emitted.				
NPAC.B4m: PROC 4: Mixed with other	No specific measures identified [EI18].	0.167		
substance(s): handling/use in closed batch				
system, occasional controlled exposure (emitted dust) during charging, sampling, discharge;				
e.g. impregnation of non powdered activated in				
anks, into which materials are charged, during				
which carbon dust is emitted.				
NPAC.B5 : PROC 5 : Mixing of carbon with	No specific measures identified [EI18].	0.167		
ittle or no liquid in open system, continuous				
significant dust release;				
NPAC.B5m : PROC 5 : Mixed with other	No specific measures identified [EI18].	0.167		
substance(s): mixing of carbon with little or no				
iquid in open system, continuous significant dust release				
NPAC.B6 : PROC 8b : Sampling or discharging	No specific measures identified [EI18].	0.033		
pags/containers, dust released but contained	140 specific measures fucilified [EI16].	0.033		
with removal system;				
e.g. Discharging ;from small bags or bigbags				
pags into treatment tanks or storage tanks				
NPAC.B6m: PROC 8b: Mixed with other	No specific measures identified [EI18].	0.033		
substance(s): sampling or discharging				
pags/containers, dust released but contained				
with removal system;				
e.g. Discharging impregnated from equipment nto containers				
NPAC.B7 : PROC 8a : Discharging	No specific measures identified [EI18].	0.167		
pags/containers, dust released, no dust removal	Two specific ineasures identified [Effo].	0.107		
system;				
e.g. Discharging non powdered Activated				
Carbon from small bags or bigbags bags into				
reatment tanks or storage tanks				
NPAC.B7m : PROC 8a : Mixed with other	No specific measures identified [EI18].	0.167		
substance(s): discharging bags/containers, dust				
released, no dust removal system				
e.g. Discharging impregnated non powdered Activated Carbon from equipment into				
containers				
NPAC.B8 : PROC 8a : Sampling of dry	No specific measures identified [EI18].	0.167		
naterial, non-dedicated facilities	peeme measures identified [Di10].	0.137		
NPAC:B8m : PROC 8a : Mixed with other	No specific measures identified [EI18].	0.167		
substance(s): sampling of dry material, non-				
ledicated facilities				
All cases where the carbon is in a slurry (with				
water or another liquid) and therefore no dust is				
emitted. E.g.: impregnation of non powdered				
Activated Carbon in suspension	No amorific management identified FET101	0.033		
NPAC.B9: PROC 9: Filling of jars or bags with activated carbon, filling of gas mask	No specific measures identified [EI18].	0.055		
canisters, POU filters, ELCD filters				
NPAC.B9m : PROC 9 : Mixed with other	No specific measures identified [EI18].	0.033		
substance(s): filling of jars or bags with		0.000		
mixtures containing non powdered activated				
carbon including catalysts, filling of gas mask				
canisters and POU filters				
All cases where the carbon is handled in a moist				
form (with water or another liquid) and therfore very little or no dust is emitted. E.g.				

according to Regulation (EC) No 1907/2006 (REACH)

Safety Data Sheet
Annex II: List of exposure scenarios covered KG 30.2

Extruded carbon

Version: 2.0

Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

	ed Carbon, High Density Skeleton non powdered / wetted, Included a cluding marine vessel/barge, road/rail car and bulk container),	
	Version 2, combined with the GES Narrative Format	
NPAC.B10m: PROC 14: Mixed with other substance(s): production of blocks / plates / tablets / from AC and binder i.e. sampling of dry material (sampling of slurry or wetted: see slurry handling or most form handling)	No specific measures identified [EI18].	0.033
NPAC.Bx : PROC 8a : Coupling and uncoupling of flexible hose	No specific measures identified [EI18].	0.167
NPAC.Bxm: PROC 8a: Mixed with other substances, coupling and uncoupling of flexible hose	No specific measures identified [EI18].	0.167
Section 2.2	Control of environmental exposure	
Product characteristics	There are no hazards potentially requiring control of risk related to environmental endpoints. This also supports the conclusion that there is no need to assess the indirect exposure of man via the environment through the oral route.	
Section 3	Exposure Estimation	
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workplace exposures unless otherwise indicated. (G21) Exposure levels can be caluculated by multiplying the RCRs listed with the DNEL (2 mg/m³).	
3.2 Environment	As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborhood of sites where a substance is manufactured or used) is not evaluated although it can not be excluded. In the Chemical Safety Assessment only systemic effects need to be considered. AC - HDS does not cause acute or long-term systemic effects.	
Section 4	Guidance to check compliance with the exposure scenarios	
4.1 Health	Page 1 of appendix 2 provides a table which can be used to check compliance with the exposure scenarios. Effectiveness of RMMs and workplace exposure levels can be assess using proper industrial hygiene techniques.	
4.2 Environment	Not applicable based on absence of hazard.	
Section 5	Other information	
5.1 Human Health	Low oxygen work procedure – Wet activated carbon depletes oxygen from air and, therefore, dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessels oxygen content should be determined and work procedures for potentially low oxygen areas should be followed.	
5.2 Environment	Spent activated carbon may contain contaminants which require Dispose of waste or used sacks/containers according to local reg	

Annex II: List of exposure scenarios covered KG 30.2

Extruded carbon Version: 2.0 Revision date: 11-01-2013

Up-stream product of water-steam activated carbon:

Table 4 Formulation of Activated Carbon, High Density Skeleton, powdered (PAC B1 through B15)

storage, maintenance and loading (including m maintenance and cleaning of equipment	arine vessel/barge, road/rail car and bulk container), sampling,	associated laboratory activities,	
Based on ECHA Template CSA&IR Part D draft	Version 2, combined with the GES Narrative Format		
Section 1	Exposure Scenario Title		
Title	Formulation of Activated Carbon, High Density Skeleton, powde	ered	
Use Descriptors	Sectors of Use: Industrial (SU 3)		
	Proces Categories: PROC1, PROC2, PROC3, PROC4, PROC8a,	PROC 8b, PROC15, PROC 22	
0	Environmental Release Categories: ERC 2		
Scenarios covered	Formulation (IU# B1 through B15), packing and re-packing of the substance are or continuous operations, including storage, materials transfers, mixing, tabletti		
	pelletisation, extrusion, large and small scale packing, sampling,		
	equipment	maintenance and cleaning of	
Section 2	Operational conditions and risk management measures		
Section 2.1	Control of worker exposure		
Product characteristics and operational			
conditions Physical form of product	Solid, high dustiness [OC6].		
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless s	stated differently) [C12]	
Amounts used	Uses covered ranging from ml up to m ³ s	stated differentity) [G13].	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [9]	G21	
Human factors not influenced by risk	Not applicable	O2 ₁	
management	Tr		
Other Operational Conditions affecting worker	Assumes activities are at ambient temperature (unless stated diffe	erently). [G17].	
exposure	Assumes a good basic standard of occupational hygiene is imple		
	Indoor (OC8).		
	Outdoor (OC 9).		
Contributing Scenarios	Risk Management Measures	Risk Charactization Ratios (RCR)	
	Note: list RMM standard phrases according to the control		
	hierarchy indicated in the ECHA template: 1. Technical		
	measures to prevent release, 2. Technical measures to prevent		
	dispersion, 3. Organizational measures, 4. Personal protection. Phrases between brackets are good practice advice only,		
	beyond REACH Chemical Safety Assessment and may be		
	communicated in Section 5 of the ES or within the main		
	sections of the SDS.		
	Unless stated otherwise all listed measures are required to		
	achieve safe use		
PAC.B1 : PROC 1 : Handling/use in closed	No specific measures identified [EI18].	0.003	
systems, no likelyhood of exposure			
PAC.B10m: PROC 14: Mixed with other	Provide extract ventilation to points where emissions occur	0.333	
substance(s):production of blocks/plates/tablets	[E54].		
From AC and a binder	Provide extract ventilation to material transfer points and other openings [E82].		
	If above technical control measures are not feasible, then adopt		
	following PPE: [PPE30].		
	Wear a respirator conforming to EN140 with Type A/P2 filter		
	or better {PPE29]		
PAC.B15 : PROC 8a : Coupling and uncoupling	Provide extract ventilation to points where emissions occur	0.167	
of flexible hose	[E54].		
PAC.B15m: PROC 8a: Mixed with other	Provide extract ventilation to material transfer points and other		
substances, coupling and uncoupling of flexible	openings [E82].		
nose	Wear a respirator conforming to EN140 with Type A/P2 filter		
DAC D15;;;; DDOC 90 ; M-1-t	or better {PPE29]	0.167	
PAC.B15w : PROC 8a : Moist or slurry (no dust)	No specific measures identified [EI18].	0.167	
PAC.B1m : PROC 1 : Mixed with other	No specific measures identified [EI18].	0.003	
substance(s): handling/use in closed systems, no	[].		
ikelyhood of exposure			
PAC.B1w : PROC 1 : Moist or slurry (no dust):	No specific measures identified [EI18].	0.003	
nandling/use in closed systems, no likelyhood			
of exposure			
PAC.B2 : RPOC 2 : Handling/use in closed	No specific measures identified [EI18].	0.333	
continuous system, occasional controlled			
exposure (sampling)			
	No specific measures identified [EI18].	0.333	
ubstances: handling/use in closed continuous			
exposure (sampling) PAC.B2m : PROC 2 : Mixed with other substances: handling/use in closed continuous system, occasional controlled exposure (sampling)	No specific measures identified [EI18].	0.333	

Extruded carbon

Version: 2.0 Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Formulation of Activated Carbon, High Density Skeleton, powdered (IU# B1 through B15), Includes recycling/recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling, associated laboratory activities, maintenance and cleaning of equipment			
	Version 2, combined with the GES Narrative Format		
PAC.B2w : PROC 2 : Moist or slurry:	No specific measures identified [EI18].	0.003	
handling/use in closed continuous system,			
occasional controlled exposure (sampling)			
PAC.B3 : PROC 3 : Handling/use in closed	No specific measures identified [EI18].	0.333	
batch system, occasional controlled exposure			
(sampling)			
PAC.B3m: PROC 3: Mixed with other	No specific measures identified [EI18].	0.333	
substance(s): handling/use in closed batch			
system, occasional controlled exposure			
(sampling)	N	0.022	
PAC.B3w : PROC 3 : Moist or slurry (no dust):	No specific measures identified [EI18].	0.033	
handling/use in closed batch system, occasional controlled exposure (sampling)			
PAC.B4 : PROC 4 : Handling/use in closed	Duovido auturat vantilation to mainte vihena amissione accoun	0.833	
batch system, occasional controlled exposure	Provide extract ventilation to points where emissions occur [E54].	0.655	
(emitted dust) during charging, sampling,	Provide extract ventilation to material transfer points and other		
discharge	openings [E82].		
PAC.B4m : PROC 4 : Mixed with other	If above technical control measures are not feasible, then adopt		
substance(s): handling/use in closed batch	following PPE: [PPE30].		
system, occasional controlled exposure (emitted	Wear a respirator conforming to EN140 with Type A/P2 filter		
dust) during charging, sampling ,discharge	or better {PPE29]		
PAC.B4w: PROC 4: Moist or slurry (no dust):	Provide extract ventilation to points where emissions occur	0.167	
handling/use in closed batch system, occasional	[E54].		
controlled exposure during charging, sampling	Provide extract ventilation to material transfer points and other		
,discharge	openings [E82].		
	If above technical control measures are not feasible, then adopt		
	following PPE: [PPE30].		
	Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]		
DAC D5 - DDOC 5 - Mining of and an arish little		0.833	
PAC.B5: PROC 5: Mixing of carbon with little or no liquid in open system, continuous	Provide extract ventilation to points where emissions occur [E54].	0.855	
significant dust release	Provide extract ventilation to material transfer points and other		
PAC.B5m : PROC 5 : Mixed with other	openings [E82].		
substance(s): mixing of carbon with little or no	If above technical control measures are not feasible, then adopt		
liquid in open system, continuous significant	following PPE: [PPE30].		
dust release	Wear a respirator conforming to EN140 with Type A/P2 filter		
	or better {PPE29]		
PAC.B5w : PROC 5 : Moist or slurry (no dust):	No specific measures identified [EI18].	0.167	
mixing of carbon with liquid in open system			
PAC.B6 : PROC 8b : Sampling or discharging	Provide extract ventilation to points where emissions occur	0.417	
bags/containers, dust released but contained	[E54].		
with removal system	Provide extract ventilation to material transfer points and other		
PAC.B6m: PROC 8b: Mixed with other substance(s): sampling or discharging	openings [E82]. If above technical control measures are not feasible, then adopt		
bags/containers, dust released but contained	following PPE: [PPE30].		
with removal system	Wear a respirator conforming to EN140 with Type A/P2 filter		
Telloval bystelli	or better {PPE29]		
PAC.B6w : PROC 8b : Moist or slurry (no	No specific measures identified [EI18].	0.033	
dust): sampling or discharging bags/containers,			
dust released but contained with removal system			
PAC.B7 : PROC 8a : Discharging	Provide extract ventilation to points where emissions occur	0.167	
bags/containers, dust released, no dust removal	[E54].		
system	Provide extract ventilation to material transfer points and other		
PAC.B7m: PROC 8a: Mixed with other	openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter		
substance(s): discharging bags/containers, dust released, no dust removal system	wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29}		
PAC.B7w :PROC 8a : Moist or slurry (no dust)	No specific measures identified [EI18].	0.167	
: discharging bags/containersexposure due to	ino specific measures identified [Eff 8].	0.107	
spillages			
PAC.B8 : PROC 8a : Sampling of dry material,	Provide extract ventilation to points where emissions occur	0.167	
non-dedicated facilities	[E54].		
PAC.B8m : PROC 8a : Mixed with other	Provide extract ventilation to material transfer points and other		
substance(s): sampling of dry material, non-	openings [E82].		
dedicated facilities	Wear a respirator conforming to EN140 with Type A/P2 filter		
	or better {PPE29]		
PAC.B8w : PROC 8a : Moist or slurry (no dust)	No specific measures identified [EI18].	0.167	
: sampling of dry material, non-dedicated			
facilities			

Safety Data Sheet

5.2 Environment

according to Regulation (EC) No 1907/2006 (REACH)

Annex II: List of exposure scenarios covered KG 30.2

Extruded carbon Version: 2.0
Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Formulation of Activated Carbon, High Density Skeleton, powdered (IU# B1 through B15), Includes recycling/ recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling, associated laboratory activities, maintenance and cleaning of equipment

Based on ECHA Template CSA&IR Part D draft Version 2, combined with the GES Narrative Format PAC.B9: PROC 9: Filling of jars or bags with Provide extract ventilation to points where emissions occur activated carbon PAC.B9m: PROC 9: Mixed with other Provide extract ventilation to material transfer points and other substance(s): filling of jars or bags with openings [E82]. mixtures containing powdered activated carbon If above technical control measures are not feasible, then adopt following PPE: [PPE30]. including catalysts Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29] PAC.B9w: PROC 9: Moist or slurry (no dust): No specific measures identified [EI18]. 0.033 filling of jars or bags with mixtures containing powdered activated carbon including catalysts Section 2.2 Control of environmental exposure Product characteristics There are no hazards potentially requiring control of risk related to environmental endpoints. This also supports the conclusion that there is no need to assess the indirect exposure of man via the environment through the oral route. Section 3 TBD **Exposure Estimation** 3.1 Human Health Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workplace exposures unless otherwise indicated. (G21) Exposure levels can be calculated by multiplying the RCRs listed with the DNEL (2 mg/m³). 3.2 Environment As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborhood of sites where a substance is manufactured or used) is not evaluated although it can not be excluded. In the Chemical Safety Assessment only systemic effects need to be considered. AC - HDS does not cause acute or long-term systemic effects. **Section 4** Guidance to check compliance with the exposure scenarios Page 1 of appendix 2 provides a table which can be used to check compliance with the exposure 4.1 Health Effectiveness of RMMs and workplace exposure levels can be assess using proper industrial hygiene techniques. 4.2 Environment Not applicable based on absence of hazard. Section 5 Other information 5.1 Human Health Low oxygen work procedure - Wet activated carbon depletes oxygen from air and, therefore,

low oxygen areas should be followed.

dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessels oxygen content should be determined and work procedures for potentially

Spend activated carbon may contain contaminants which require is the following:

Dispose of waste or used sacks/containers according to local regulations [ENVT10].

Annex II: List of exposure scenarios covered KG 30.2

Extruded carbon

Version: 2.0 Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Table 5 Professional use of Activated Carbon, High Density Skeleton, non powdered / wetted (NPAC. D1 through D20)

activities.	or containers; and exposures during mixing/diluting in the pre	paratory phase and cleaning	
*	Version 2, combined with the GES Narrative Format		
Section 1	Exposure Scenario Title	1 1/ 1	
Title	Professional end-use of Activated Carbon, High Density Skeleton, non-powdered / wetted		
Use Descriptors	Sectors of Use: Industrial (SU 22) Proces Categories: PROC1, PROC2, PROC3, PROC4, PROC8a,	DDOC 95 DDOC 0 DDOC 15	
	Environmental Release Categories: ERC 4	PROC 80, PROC 9, PROC 13	
Scenarios covered		onant in a praparation including	
Scenarios covered	Covers the professional use (NPAC. D1 through D20) as a component in a preparation including pouring/unloading from bags, drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities.		
Section 2			
Section 2.1	Operational conditions and risk management measures Control of worker exposure		
Product characteristics and operational conditions	Control of worker exposure		
Physical form of product	Solid, low dustiness [OC1].		
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless s	tated differently) [G13]	
Amounts used	Uses covered ranging from ml up to m ³ s	nated differently) [G13].	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [9]	7 21	
Human factors not influenced by risk	Not applicable	×-1	
management	Tr-wast		
Other Operational Conditions affecting worker	Assumes activities are at ambient temperature (unless stated diffe	erently). [G17].	
exposure	Assumes a good basic standard of occupational hygiene is implet		
•	Indoor (OC8).		
	Outdoor (OC 9).		
Contributing Scenarios	Risk Management Measures	Risk Charactization Ratios (RCR)	
•	Note: list RMM standard phrases according to the control		
	hierarchy indicated in the ECHA template: 1. Technical		
	measures to prevent release, 2. Technical measures to prevent		
	dispersion, 3. Organizational measures, 4. Personal protection.		
	Phrases between brackets are good practice advice only,		
	beyond REACH Chemical Safety Assessment and may be		
	communicated in Section 5 of the ES or within the main		
	sections of the SDS.		
	Unless stated otherwise all listed measures are required to		
	achieve safe use		
NPAC.D1 : PROC 15 : Laboratory use of non	No specific measures identified [EI18].	0.033	
powdered AC with dust removal	N 'C' '1 ('C' 1 [E710]	0.222	
NPAC.D2m : PROC 5: Mixed with other	No specific measures identified [EI18].	0.333	
substance(s): activated carbon in the soil	N: C: 14: C-1 [E110]	0.222	
NPAC.D2m: PROC 5: Mixed with other	No specific measures identified [EI18].	0.333	
substance(s): activated carbon in the soil	No specific measures identified [ET19]	0.002	
NPAC.D3 : PROC 1 : Handling/use in closed systems, no likelyhood of exposure	No specific measures identified [EI18].	0.003	
NPAC.D.3m : PROC 1 Mixed with other	No specific measures identified [EI18].	0.003	
substances; handling/use in closed systems, no	Two specific measures identified [E116].	0.003	
likelyhood of exposure			
NPAC.D4m : PROC 3 : Mixed with other	No specific measures identified [EI18].	0.033	
substance(s): Transfer by suction of AC from	110 specific measures identified [Eff0].	0.055	
filter into dedicated tank car			
NPAC.D5m : PROC 1 : Mixed with other	No specific measures identified [EI18].	0.003	
substance(s): handling and use of articles			
without release INDOOR			
NPAC.D6m: PROC 1 : Mixed with other	No specific measures identified [EI18].	0.003	
substance(s): handling and use of articles			
without release OUTDOOR			
NPAC.D7m/a: PROC 8a: Mixed with other	No specific measures identified [EI18].	0.167	
substances, use in municipal swimming pools or			
aquaria			
NPAC.D7m/d : PROC 8a : Mixed with other	No specific measures identified [EI18].	0.167	
substances, use in municipal swimming pools or			
aquaria			
	N	0.003	
NPAC.D8m/a: PROC 2: Mixed with other	No specific measures identified [EI18].	0.003	
NPAC.D8m/a: PROC 2: Mixed with other substances, use in municipal swimming pools or	No specific measures identified [EII8].	0.003	

Extruded carbon

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	nsity Skeleton, non powdered / wetted (NPAC. D1 thro	
activities.	or containers; and exposures during mixing/diluting in	the preparatory phase and cleaning
	Version 2, combined with the GES Narrative Format	
NPAC.D8m/d: PROC 2: Mixed with other substances, use in municipal swimming pools or aquaria	No specific measures identified [EI18].	0.003
NPAC.D9m: PROC 9: Use by medical / health professional in medical equipment	No specific measures identified [EI18].	0.167
NPAC.D10 : PROC 2 : Handling/use in closed continuous system, occasional controlled exposure (sampling)	No specific measures identified [EI18].	0.003
NPAC.D10: PROC 3: Handling/use in closed batch system, occasional controlled exposure (sampling)	No specific measures identified [EI18].	0.033
NPAC.D10m: PROC 2: Mixed with other substances: handling/use in closed continuous system, occasional controlled exposure (sampling)	No specific measures identified [EI18].	0.003
NPAC.D10m: PROC3: Mixed with other substances: handling/use in closed batch system, occasional controlled exposure (sampling)	No specific measures identified [EI18].	0.033
NPAC.D11 : PROC 4 : Handling/use in closed batch system, occasional controlled exposure (emitted dust)	No specific measures identified [EI18].	0.333
NPAC.D11m: PROC 4: Mixed with other substances: handling/use in closed batch system, occasional controlled exposure (emitted dust) during charging, sampling, discharge	No specific measures identified [EI18].	0.333
NPAC.D12 : PROC 8b : Sampling or discharging bags/containers, dust release but contained with removal system sampling, discharge	No specific measures identified [EI18].	0.167
NPAC.D12m: PROC 8b: Mixed with other substances: sampling or discharging bags/containers, dust release but contained with removal system sampling, discharge	No specific measures identified [EI18].	0.167
NPAC.D13: PROC 8a: Discharging bags/containers, dust released, no dust removal system	No specific measures identified [EI18].	0.167
NPAC.D13m: PROC 8a: Mixed with other substances; discharging bags/containers, dust released, no dust removal system	No specific measures identified [EII8].	0.167
NPAC.D14 : PROC 8a : Sampling of dry material, non-dedicated facilities	No specific measures identified [EI18].	0.167
NPAC.D14m: PROC 8a: Mixed with other substances: sampling of material, non-dedicated facilities	No specific measures identified [EI18].	0.167
NPAC.D16 : PROC 8a : Coupling and uncoupling of flexible hose	No specific measures identified [EI18].	0.167
NPAC.D16m: PROC 8a: Mixed with other substances, coupling and uncoupling of flexible hose	No specific measures identified [EI18].	0.167
Section 2.2	Control of environmental exposure	
Product characteristics	There are no hazards potentially requiring control of risk supports the conclusion that there is no need to assess th through the oral route.	
Section 3 TBD	Exposure Estimation	15.75
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workplace exposures unless otherwise indicated. (G21) Exposure levels can be calculated by multiplying the RCRs listed with the DNEL (2 mg/m³).	
3.2 Environment	As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborhood of sites where a substance is manufactured or used) is not evaluated although it can not be excluded. In the Chemical Safety Assessment only systemic effects need to be considered. AC - HDS does not cause acute or long-term systemic effects.	
Section 4	Guidance to check compliance with the exposure scen	narios

according to Regulation (EC) No 1907/2006 (REACH)

Safety Data Sheet
Annex II: List of exposure scenarios covered

KG 30.2

Extruded carbon Version: 2.0

Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Professional use of Activated Carbon, High Density Skeleton, non powdered / wetted (NPAC. D1 through D20) as a component in a preparation			
including pouring/unloading from bags, drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning			
activities.			
Based on ECHA Template CSA&IR Part D draft Version 2, combined with the GES Narrative Format			
4.1 Health	Page 1 of appendix 2 provides a table which can be used to check compliance with the exposure		
	scenarios.		
	Effectiveness of RMMs and workplace exposure levels can be assess using proper industrial hygiene		
	techniques.		
4.2 Environment	Not applicable based on absence of hazard.		

Section 5	Other information
5.1 Human Health	Low oxygen work procedure – Wet activated carbon depletes oxygen from air and, therefore,
	dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing
	activated carbon, the vessels oxygen content should be determined and work procedures for potentially
	low oxygen areas should be followed.
5.2 Environment	Spend activated carbon may contain contaminants which require is the following:
	Dispose of waste or used sacks/containers according to local regulations [ENVT10].

> **Extruded carbon** Version: 2.0 Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Table 6 Industrial and use (PAC A1 through A17) of Activated Carbon, High Density Skeleton, newdored

W. J. O. H. J. M. J. OFGOV. S. F		
•	PROC15, PROC	
	s, including	
Control of worker exposure		
	3].	
Uses covered ranging from ml up to m ³ s		
Not applicable		
Assumes a good basic standard of occupational hygiene is implemented [G1].		
Outdoor (OC 9).		
Risk Management Measures	Risk	
Note: list RMM standard phrases according to the control hierarchy indicated in the	Charactization	
ECHA template: 1. Technical measures to prevent release, 2. Technical measures to	Ratios (RCR)	
Unless stated otherwise all listed measures are required to achieve safe use		
No specific measures identified [EI18].	0.003	
No specific measures identified [EI18].	0.003	
No specific measures identified [EI18].	0.003	
No specific measures identified [EI18].	0.333	
No specific measures identified [EI18].	0.333	
No specific measures identified [EI18].	0.003	
No specific measures identified [EI18].	0.333	
No specific measures identified [EI18].	0.333	
37 10 11 10 1577403	0.022	
No specific measures identified [EI18].	0.033	
No specific measures identified [EII8].	0.033	
	Covers daily exposures up to 8 hours (unless stated differently) [G2] Not applicable Assumes activities are at ambient temperature (unless stated differently). [G17]. Assumes a good basic standard of occupational hygiene is implemented [G1]. Indoor (OC8). Outdoor (OC 9). Risk Management Measures Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organizational measures, 4. Personal protection. Phrases between brackets are good practice advice only, beyond REACH Chemical Safety Assessment and may be communicated in Section 5 of the ES or within the main sections of the SDS. Unless stated otherwise all listed measures are required to achieve safe use No specific measures identified [EI18]. No specific measures identified [EI18].	

> **Extruded carbon** Up-stream product of water-steam activated carbon:

Version: 2.0 Revision date: 11-01-2013

sampling.		
PAC.A4: PROC 4: Handling/use in closed batch system, occasional controlled exposure (emitted dust) PAC.A4m: PROC 4: Mixed with other substances: handling/use in closed batch system, occasional controlled exposure (emitted	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.833
dust) during charging, sampling, discharge		
PAC.A4w: PROC 4: Moist or slurry (no dust): nandling/use in closed batch system, occasional controlled exposure	No specific measures identified [EI18].	0.167
PAC.A5: PROC 8b: Sampling or discharging bags/containers, dust contained with removal system PAC.A5m: PROC 8b: Mixed with other substances: sampling or discharging bags/containers, dust release contained with removal system	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.417
PAC.A5w: PROC 8b: Moist or slurry (no dust) sampling or discharging bags/containers, dedicated plants (no exposure)	No specific measures identified [EI18].	0.033
PAC.A6: PROC 8a: Discharging bags/containers, dust released, no dust removal system PAC.A6m: PROC 8a: Mixed with other substances; discharging bags/containers, dust released, no dust removal system	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.167
PAC.A6w: PROC 8a: Moist or slurry (no dust) discharging bags/containers, exposure due to spillages	No specific measures identified [EI18].	0.167
PAC.A7: PROC 8a: Sampling of dry material, non-dedicated facilities PAC.A7m: PROC 8a: Mixed with other substances: sampling of material, non-dedicated facilities	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.167
PAC.A7w: PROC 8a: Moist or slurry (no dust): sampling of material, non-dedicated facilities	No specific measures identified [EI18].	0.167
PAC.A8m: PROC 16: Mixed with other substances: waste incineration with energy recovery	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29}	0.333
PAC.A9m: PROC 5: Mixed with other substances: activated carbon in soil	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.833
PAC.A10m: PROC 2: Handling/use in closed continuous system, occasional controlled exposure (sampling)	No specific measures identified [EI18].	0.333
PAC.A11m: PROC 9: Filling of small containers in dedicated facilities	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29}	0.667
PAC.A12m: PROC 14: Pellitizing or extrusion	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29}	0.333
PAC.A13m: PROC 19: Hand mixing	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29}	0.833

Annex II: List of exposure scenarios covered **KG 30.2**

Extruded carbon

Version: 2.0 Up-stream product of water-steam activated carbon: **Revision date: 11-01-2013**

Industrial end-use (PAC A1 through A17) of Activated Carbon, High Density Skeleton, powdered as a component in a preparation including transfer from storage, pouring/unloading from drums or containers in batch or continuous operations, including storage, materials transfers, sampling. PAC.A14: PROC 15 Laboratory use of Provide extract ventilation to points where emissions occur [E54]. 0.167 powdered AC with dust removal Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29] PAC.A15m: PROC 1 mixed with other No specific measures identified [EI18]. 0.003 substances: handling and use of articles without release -- INDOOR PAC.A15m: PROC 1 mixed with other No specific measures identified [EI18]. 0.033 substances: handling and use of articles without release -- OUTDOOR PAC.A16m: PROC 3: Mixed with other No specific measures identified [EI18]. 0.333 substance(s): Transfer by suction of AC from filter into dedicated tank car PAC.A17: PROC 8a: Mixed with other Provide extract ventilation to points where emissions occur [E54]. 0.833 substances, use in municipal swimming pools or Provide extract ventilation to material transfer points and other openings [E82]. aquaria Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} PAC.A17m: PROC 8a: Mixed with other substances, use in municipal swimming pools or PAC.A18: PROC 2: Mixed with other 0.033 No specific measures identified [EI18]. substances, use in municipal swimming pools or PAC.A18m: PROC 2: Mixed with other 0.033 No specific measures identified [EI18]. substances, use in municipal swimming pools or PAC.Ax: PROC 8a: Coupling and uncoupling Provide extract ventilation to points where emissions occur [E54]. 0.167 of hose Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29] Section 2.2 Control of environmental exposure Product characteristics There are no hazards potentially requiring control of risk related to environmental endpoints. This also supports the conclusion that there is no need to assess the indirect exposure of man via the environment through the oral route. Section 3 **Exposure Estimation** 3.1 Human Health Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workplace exposures unless otherwise indicated. (G21) Exposure levels can be calculated by multiplying the RCRs listed with the DNEL (2 mg/m³). 3.2 Environment As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborhood of sites where a substance is manufactured or used) is not evaluated although it can not be excluded. In the Chemical Safety Assessment only systemic effects need to be considered. AC - HDS does not cause acute or long-term systemic effects. Section 4 Guidance to check compliance with the exposure scenarios Page 1 of appendix 2 provides a table which can be used to check compliance with the exposure 4.1 Health Effectiveness of RMMs and workplace exposure levels can be assess using proper industrial hygiene techniques. Not applicable based on absence of hazard. 4.2 Environment Section 5 Other information Low oxygen work procedure - Wet activated carbon depletes oxygen from air and, therefore, 5.1 Human Health dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessels oxygen content should be determined and work procedures for potentially low oxygen areas should be followed. 5.2 Environment Spend activated carbon may contain contaminants which require is the following: Dispose of waste or used sacks/containers according to local regulations [ENVT10].

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Table 7 Professional use (NPAC. D1 through D20) of Activated Carbon, High Density Skeleton, non powdered / wetted

	rbon, High Density Skeleton, non powdered / wetted as a component in ers; and exposures during mixing/diluting in the preparatory phase and	
activities.	ers, and exposures during mixing/unuting in the preparatory phase and	Cleaning
Based on ECHA Template CSA&IR Part D draft Version 2, co	ombined with the GES Narrative Format	
Section 1	Exposure Scenario Title	
Title	Professional end-use of Activated Carbon, High Density Skeleton, non-po	owdered / wetted
Use Descriptors	Sectors of Use: Industrial (SU 22)	
ose Besemptons	Proces Categories: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC 8	sh. PROC 9.
	PROC15	
	Environmental Release Categories: ERC 5, ERC 8a, ERC8d, ERC9a, ERC	C9b
Scenarios covered	Covers the professional use (NPAC. D1 through D20) as a component in	
	including pouring/unloading from bags, drums or containers; and exposur	es during
	mixing/diluting in the preparatory phase and cleaning activities.	
Section 2	Operational conditions and risk management measures	
Section 2.1	Control of worker exposure	
Product characteristics and operational conditions	•	
Physical form of product	Solid, low dustiness [OC1].	
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated diff	ferently) [G13].
Amounts used	Uses covered ranging from ml up to m ³ s	27.2
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]	
Human factors not influenced by risk management	Not applicable	
Other Operational Conditions affecting worker exposure	Assumes activities are at ambient temperature (unless stated differently).	[G17]
Onici Operational Conditions affecting worker exposure	Assumes a good basic standard of occupational hygiene is implemented [9]	
	Indoor (OC8).	O1].
	Outdoor (OC 9).	
		I D' 1
Contributing Scenarios	Risk Management Measures	Risk
	Note: list RMM standard phrases according to the control hierarchy	Charactization
	indicated in the ECHA template: 1. Technical measures to prevent	Ratios (RCR)
	release, 2. Technical measures to prevent dispersion, 3. Organizational	
	measures, 4. Personal protection. Phrases between brackets are good	
	practice advice only, beyond REACH Chemical Safety Assessment and	
	may be communicated in Section 5 of the ES or within the main	
	sections of the SDS.	
	Unless stated otherwise all listed measures are required to achieve safe	
	use	
NPAC.D1 : PROC 15 : Laboratory use of non powdered	No specific measures identified [EI18].	0.033
AC with dust removal		
Environmental release category (ERC):		
ERC 8a: Wide dispersive indoor use of processing aids in		
open systems		
NPAC.D2m : PROC 5: Mixed with other substance(s):	No specific measures identified [EI18].	0.333
activated carbon in the soil		
ERC 5: Industrial use resulting in inclusion into or onto a		
matrix		
NPAC.D2m : PROC 5: Mixed with other substance(s):	No specific measures identified [EI18].	0.333
activated carbon in the soil		
ERC 8d: Wide dispersive outdoor use of processing aids in		
open systems		
NPAC.D3 : PROC 1 : Handling/use in closed systems, no	No specific measures identified [EI18].	0.003
likelyhood of exposure	110 specific incusures identified [E110].	0.003
ERC 9a: Wide dispersive indoor use of substances in closed		
systems		
NPAC.D.3m : PROC 1 Mixed with other substances;	No specific measures identified [EI18].	0.003
handling/use in closed systems, no likelyhood of exposure	110 specific incasures identified [Eff 0].	0.003
ERC 9a: Wide dispersive indoor use of substances in closed		
•		
systems	No analisis massaures identified [EI] 01	0.022
NPAC.D4m: PROC 3: Mixed with other substance(s):	No specific measures identified [EI18].	0.033
Transfer by suction of AC from filter into dedicated tank		
car		
ERC 9b: Wide dispersive outdoor use of substances in		
closed systems		
NPAC.D5m : PROC 1 : Mixed with other substance(s):	No specific measures identified [EI18].	0.003
		1
handling and use of articles without release – INDOOR		

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Professional use (NPAC. D1 through D20) of Activated Ca including pouring/unloading from bags, drums or contain activities.		
Based on ECHA Template CSA&IR Part D draft Version 2, c	ombined with the GES Narrative Format	
NPAC.D6m: PROC 1 : Mixed with other substance(s): handling and use of articles without release – OUTDOOR ERC 9b: Wide dispersive outdoor use of substances in closed systems	No specific measures identified [EI18].	0.003
NPAC.D7m/a: PROC 8a: Mixed with other substances, use in municipal swimming pools or aquaria ERC 8a: Wide dispersive indoor use of processing aids in open systems	No specific measures identified [EI18].	0.167
NPAC.D7m/d: PROC 8a: Mixed with other substances, use in municipal swimming pools or aquaria ERC 8a: Wide dispersive indoor use of processing aids in open systems	No specific measures identified [EI18].	0.167
NPAC.D8m/a: PROC 2: Mixed with other substances, use in municipal swimming pools or aquaria ERC 8d: Wide dispersive outdoor use of processing aids in open systems	No specific measures identified [EI18].	0.003
NPAC.D8m/d: PROC 2: Mixed with other substances, use in municipal swimming pools or aquaria ERC 9a: Wide dispersive indoor use of substances in closed systems	No specific measures identified [EI18].	0.003
NPAC.D9m: PROC 9: Use by medical / health professional in medical equipment ERC 9a: Wide dispersive indoor use of substances in closed systems	No specific measures identified [EI18].	0.167
NPAC.D10: PROC 2: Handling/use in closed continuous system, occasional controlled exposure (sampling) ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems	No specific measures identified [EI18].	0.003
NPAC.D10: PROC 3 : Handling/use in closed batch system, occasional controlled exposure (sampling) ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems	No specific measures identified [EI18].	0.033
NPAC.D10m: PROC 2: Mixed with other substances: handling/use in closed continuous system, occasional controlled exposure (sampling) ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems	No specific measures identified [EI18].	0.003
NPAC.D10m: PROC3: Mixed with other substances: handling/use in closed batch system, occasional controlled exposure (sampling) ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems	No specific measures identified [EI18].	0.033
NPAC.D11: PROC 4: Handling/use in closed batch system, occasional controlled exposure (emitted dust) ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems	No specific measures identified [EI18].	0.333
NPAC.D11m: PROC 4: Mixed with other substances: handling/use in closed batch system, occasional controlled exposure (emitted dust) during charging, sampling, discharge ERC 9a: Wide dispersive indoor use of substances in closed systems	No specific measures identified [EI18].	0.333
NPAC.D12 : PROC 8b : Sampling or discharging bags/containers, dust release but contained with removal system sampling, discharge ERC 8a: Wide dispersive indoor use of processing aids in open systems	No specific measures identified [EI18].	0.167

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including pouring/unloading from bags, drums or contain	arbon, High Density Skeleton, non powdered / wetted as a component in ers; and exposures during mixing/diluting in the preparatory phase and	
activities. Based on ECHA Template CSA&IR Part D draft Version 2, or	combined with the GES Narrative Format	
NPAC.D12m: PROC 8b: Mixed with other substances: sampling or discharging bags/containers, dust release but contained with removal system sampling, discharge ERC 8a: Wide dispersive indoor use of processing aids in	No specific measures identified [EII8].	0.167
open systems NPAC.D13 : PROC 8a : Discharging bags/containers, dust released, no dust removal system ERC 8a: Wide dispersive indoor use of processing aids in open systems	No specific measures identified [EI18].	0.167
NPAC.D13m: PROC 8a: Mixed with other substances; discharging bags/containers, dust released, no dust removal system ERC 8a: Wide dispersive indoor use of processing aids in	No specific measures identified [EI18].	0.167
open systems NPAC.D14: PROC 8a: Sampling of dry material, non-dedicated facilities ERC 8a: Wide dispersive indoor use of processing aids in open systems	No specific measures identified [EII8].	0.167
NPAC.D14m: PROC 8a: Mixed with other substances: sampling of material, non-dedicated facilities ERC 8a: Wide dispersive indoor use of processing aids in open systems	No specific measures identified [EI18].	0.167
NPAC.D16: PROC 8a: Coupling and uncoupling of flexible hose ERC 8a: Wide dispersive indoor use of processing aids in open systems	No specific measures identified [EI18].	0.167
NPAC.D16m: PROC 8a: Mixed with other substances, coupling and uncoupling of flexible hose ERC 8a: Wide dispersive indoor use of processing aids in open systems	No specific measures identified [EI18].	0.167
Section 2.2	Control of environmental exposure	
Product characteristics	There are no hazards potentially requiring control of risk related to environmental endpoints. This also supports the conclusion that there is no need to assess the indirect exposure of man via the environment through the oral route.	
Section 3 TBD	Exposure Estimation	
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workplace exposures unless otherwise indicated. (G21) Exposure levels can be calculated by multiplying the RCRs listed with the DNEL (2 mg/m³).	
3.2 Environment	As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborhood of sites where a substance is manufactured or used) is not evaluated although it can not be excluded. In the Chemical Safety Assessment only systemic effects need to be considered. AC - HDS does not cause acute or long-term systemic effects.	
Section 4	Guidance to check compliance with the exposure scenarios	
4.1 Health	Page 1 of appendix 2 provides a table which can be used to check compliance with the exposure scenarios. Effectiveness of RMMs and workplace exposure levels can be assess using proper industrial hygiene techniques.	
4.2 Environment	Not applicable based on absence of hazard.	
Section 5	Other information	
5.1 Human Health	Low oxygen work procedure – Wet activated carbon depletes oxygen from air and, therefore, dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessels oxygen content should be determined and work procedures for potentially low oxygen areas should be followed.	
5.2 Environment	Spend activated carbon may contain contaminants which require is the following: Dispose of waste or used sacks/containers according to local regulations [ENVT10].	

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Table 8 Industrial end-use of Activated Carbon, High Density Skeleton, powdered (PAC A1 through A17)

transfer from storage, pouring/unloading from	Density Skeleton, powdered (PAC A1 through A17) as a component in a preparation drums or containers in batch or continuous operations, including storage, materials	
sampling.		
	Version 2, combined with the GES Narrative Format	
Section 1	Exposure Scenario Title	
Title	Industrial end-use of Activated Carbon, High Density Skeleton, powdered	
Use Descriptors	Sectors of Use: Industrial (SU 3)	
	Proces Categories: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC 8b, PROC 9, P	PROC15, PROC
	16 Environmental Release Categories: ERC 4	
Scenarios covered	Industrial end-use (IU# A1 through A17) as a component in a preparation including tra- storage, pouring/unloading from drums or containers in batch or continuous operations.	
	storage, materials transfers, sampling.	
Section 2	Operational conditions and risk management measures	
Section 2.1	Control of worker exposure	
Product characteristics and operational		
conditions	0-1:4 1:-1-44: [000]	
Physical form of product	Solid, high dustiness [OC6].	21
Concentration of substance in product Amounts used	Covers percentage substance in the product up to 100 % (unless stated differently) [G1:	3].
	Uses covered ranging from ml up to m ³ s	
Frequency and duration of use Human factors not influenced by risk	Covers daily exposures up to 8 hours (unless stated differently) [G2] Not applicable	
management minuenced by risk	του αμγιισασίο	
Other Operational Conditions affecting worker	Assumes activities are at ambient temperature (unless stated differently). [G17].	
exposure	Assumes a good basic standard of occupational hygiene is implemented [G1]. Indoor (OC8). Outdoor (OC 9).	
Contributing Scenarios	Risk Management Measures	Risk
Contributing Scenarios	Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organizational measures , 4. Personal protection. Phrases between brackets are good practice advice only, beyond REACH Chemical Safety Assessment and may be communicated in Section 5 of the ES or within the main sections of the SDS.	Charactizatio Ratios (RCR
	Unless stated otherwise all listed measures are required to achieve safe use	
PAC.D1 : PROC 15 : Laboratory use of powdered AC with dust removal ERC 8a: Wide dispersive indoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29}	0.333
PAC.D8w: PROC 4: moist or slurry (no dust): handling/use in closed batch system, occasional controlled exposure sampling, discharge ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	No specific measures identified [EI18].	0.333
PAC.D9: PROC 8b: Sampling or discharging bags/containers, dust release but contained with dust removal system sampling, discharge PAC.D9m: PROC 8b: Mixed with other substances: sampling or discharging bags/containers, dust release but contained with removal system sampling, discharge ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} If above technical control measures and personal protection are not feasible, then adopt following PPE: [PPE30]. Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].	0.833
PAC.D9w: PROC 8b: Moist or slurry(no dust): sampling or discharging bags/containers, dedicated plants(no exposure) sampling, discharge ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	No specific measures identified [EI18].	0.167

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	drums or containers in batch or continuous operations, including storage, materia	ıls transfers,
PAC.D10 : PROC 8a : Discharging bags/containers, dust released, no dust removal system PAC.D10m : PROC 8a : Mixed with other substances; discharging bags/containers, dust released, no dust removal system ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} If above technical control measures and personal protection are not feasible, then adopt following PPE: [PPE30]. Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].	0.833
PAC.D10w: PROC 8a: Moist or slurry (no lust); discharging bags/containers, exposure lust to spillages ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	No specific measures identified [EI18].	0.167
PAC.D11: PROC 8a: Sampling of dry material, non-dedicated facilities PAC.D11m: PROC 8a: Mixed with other substances: sampling of material, non-dedicated facilities PRC 8a: Wide dispersive indoor use of processing aids in open systems PRC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} If above technical control measures and personal protection are not feasible, then adopt following PPE: [PPE30]. Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].	0.833
AC.D11w: PROC 8a: Moist or slurry(no lust): sampling of material, non-dedicated acilities ERC 8a: Wide dispersive indoor use of crocessing aids in open systems ERC 8d: Wide dispersive outdoor use of crocessing aids in open systems	No specific measures identified [EII8].	0.167
PAC.D12m: PROC 16: Mixed with other ubstances: waste incineration with energy ecovery ERC 9a: Wide dispersive indoor use of ubstances in closed systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} If above technical control measures and personal protection are not feasible, then adopt following PPE: [PPE30]. Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].	
PAC.D13m: PROC 3: Mixed with other ubstance(s): Transfer by suction of AC from liter into dedicated tank car BRC 8c: Wide dispersive indoor use resulting in neclusion into or onto a matrix BRC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better [PPE29]	0.167
AC.D14m: PROC 8a: Mixed with other ubstances, use in municipal swimming pools or quaria RC 8a: Wide dispersive indoor use of rocessing aids in open systems RC 8d: Wide dispersive outdoor use of rocessing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} If above technical control measures and personal protection are not feasible, then adopt following PPE: [PPE30]. Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].	0.833
PAC.D15m/a: PROC 2: Mixed with other ubstances, use in municipal swimming pools or quaria ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.167
PAC.D15m/d: PROC 2: Mixed with other substances, use in municipal swimming pools or equaria ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.167

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Industrial end-use of Activated Carbon, High Density Skeleton, powdered (PAC A1 through A17) as a component in a preparation including transfer from storage, pouring/unloading from drums or containers in batch or continuous operations, including storage, materials transfers, sampling.			
PAC.D16m: PROC 9: use by medical / health professional in medical equipment ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8a: Wide dispersive indoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.667	
PAC.D17: PROC 8a: Coupling and uncoupling of flexible hose PAC.D17m: PROC 8a: Mixed with other substances, coupling and uncoupling of flexible hose ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} If above technical control measures and personal protection are not feasible, then adopt following PPE: [PPE30]. Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].	0.833	
PAC.D17w: PROC 8a: Moist or slurry, coupling and uncoupling of flexible hose ERC 8d: Wide dispersive outdoor use of processing aids in open systems	No specific measures identified [EI18].	0.167	
PAC.D2m: PROC 5: Mixed with other substance(s): activated carbon in the soil ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} If above technical control measures and personal protection are not feasible, then adopt following PPE: [PPE30]. Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].	0.833	
PAC.D3m: PROC 1: Mixed with other substances: handling and use of articles without release – INDOOR ERC 9a: Wide dispersive indoor use of substances in closed systems	No specific measures identified [EI18].	0.033	
PAC.D4m: PROC 1: Mixed with other substances: handling and use of articles without release – OUTDOOR ERC 9b: Wide dispersive outdoor use of substances in closed systems	No specific measures identified [EI18].	0.033	
PAC.D5: PROC 1: Handling/use in closed systems, no likelyhood of exposure PAC.D5m: PROC 1: mixed with other substances; handling/use in closed systems, no likelyhood of exposure PAC.D5w: PROC 1: Moist or slurry; handling/use in closed systems, no likelyhood of exposure ERC 9a: Wide dispersive indoor use of substances in closed systems ERC 9b: Wide dispersive outdoor use of substances in closed systems	No specific measures identified [EI18].	0.033	
PAC.D6: PROC 2: Handling/use in closed continuous system, occasional controlled exposure (sampling) PAC.D6m: PROC 2: Mixed with other substances: handling/use in closed continuous system, occasional controlled exposure (sampling) ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29}	0.167	
PAC.D6w: PROC 2: Moist or slurry (no dust): handling/use in closed continuous system, occasional controlled exposure (sampling) ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	No specific measures identified [EI18].	0.003	

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Industrial end-use of Activated Carbon, High Density Skeleton, powdered (PAC A1 through A17) as a component in a preparation including transfer from storage, pouring/unloading from drums or containers in batch or continuous operations, including storage, materials transfers, sampling.				
PAC.D7: PROC 3: Handling/use in closed batch system, occasional controlled exposure (sampling) PAC.D7m: PROC 3: Mixed with other substances: handling/use in closed batch system, occasional controlled exposure (sampling) ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. If above technical control measures are not feasible, then adopt following PPE: [PPE30]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29]	0.167		
PAC.D7w: PROC 3: Moist or slurry (no dust): handling/use in closed batch system, occasional controlled exposure (sampling) ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	No specific measures identified [EI18].	0.033		
PAC.D8: PROC 4: Handling/use in closed batch system, occasional controlled exposure (emitted dust) PAC.D8m: PROC 4: Mixed with other substances: handling/use in closed batch system, occasional controlled exposure (emitted dust) during charging, sampling, discharge ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	Provide extract ventilation to points where emissions occur [E54]. Provide extract ventilation to material transfer points and other openings [E82]. Wear a respirator conforming to EN140 with Type A/P2 filter or better {PPE29} If above technical control measures and personal protection are not feasible, then adopt following PPE: [PPE30]. Wear a full face respirator conforming to EN140 with Type A/P2 filter or better [PPE32].	0.833		
PAC.Ax: PROC 8a: Coupling and uncoupling of hose ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems	No specific measures identified [EI18].	0.167		
Section 2.2	Control of environmental exposure			
Product characteristics	There are no hazards potentially requiring control of risk related to environmental endp supports the conclusion that there is no need to assess the indirect exposure of man via through the oral route.			
Section 3 TBD	Exposure Estimation			
3.1 Human Health	Estimated workplace exposures are not expected to exceed DNELs when the identified management measures are adopted. (G8) The ECETOC TRA tool has been used to estimate dermal workplace exposures unless indicated. (G21) Exposure levels can be calculated by multiplying the RCRs listed with the DNEL (2 m.)	otherwise		
3.2 Environment	As no hazards are present, no exposure estimation is needed. The indirect exposure of man via ambient air (e.g. in the neighborhood of sites where a substance is manufactured or used) is not evaluated although it can not be excluded. In the Chemical Safety Assessment only systemic effects need to be considered. AC - HDS does not cause acute or long-term systemic effects.			
Section 4	Guidance to check compliance with the exposure scenarios			
4.1 Health	Page 1 of appendix 2 provides a table which can be used to check compliance with the scenarios. Effectiveness of RMMs and workplace exposure levels can be assess using proper indutechniques.	-		
4.2 Environment	Not applicable based on absence of hazard.			
Section 5	Other information			
5.1 Human Health	Low oxygen work procedure – Wet activated carbon depletes oxygen from air and, there dangerously low levels of oxygen may be encountered. Whenever workers enter a vesse activated carbon, the vessels oxygen content should be determined and work procedure low oxygen areas should be followed.	el containing		
5.2 Environment	Spend activated carbon may contain contaminants which require is the following: Dispose of waste or used sacks/containers according to local regulations [ENVT10].			

KG 30.2

Extruded carbon Version: 2.0

Up-stream product of water-steam activated carbon: Revision date: 11-01-2013

Table 9 Consumer uses of non-powdered Activated Carbon

Identified Use (IU) name	Use descriptors	Risk characterization ratio (RCR)
NPAC: dry handling	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix Subsequent service life relevant for that use?: no	o
NPAC: mixed with other substances, wet handling	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix Subsequent service life relevant for that use?: no	0
NPAC, mixed with other substance(s): handling and use of articles without release INDOOR	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 9a: Wide dispersive indoor use of substances in closed systems Subsequent service life relevant for that use?: no	0
NPAC, mixed with other substance(s): handling and use of articles without release OUTDOOR	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 9b: Wide dispersive outdoor use of substances in closed systems Subsequent service life relevant for that use?: no	0
NPAC, mixed with other substance(s): handling and use of preparations or articles with release INDOOR	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 9a: Wide dispersive indoor use of substances in closed systems Subsequent service life relevant for that use?: no	0
NPAC, mixed with other substance(s): handling and use of preparations or articles with release OUTDOOR	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 9b: Wide dispersive outdoor use of substances in closed systems Subsequent service life relevant for that use?: no	0

Table 10 Consumer uses of powdered activated carbon

Identified Use (IU) name	Use descriptors	Risk characterization ratio (RCR)
PAC, mixed with other substance(s): handling and use of articles without release INDOOR	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 9a: Wide dispersive indoor use of substances in closed systems Subsequent service life relevant for that use?: no	0
PAC, mixed with other substance(s): handling and use of articles without release OUTDOOR	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 9b: Wide dispersive outdoor use of substances in closed systems Subsequent service life relevant for that use?: no	0
PAC, mixed with other substance(s): handling and use of preparations or articles with release INDOOR	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems Subsequent service life relevant for that use?: no	o
PAC, mixed with other substance(s): handling and use of preparations or articles with release OUTDOOR	Chemical product category (PC): PC 2: Adsorbents Environmental release category (ERC): ERC 8d: Wide dispersive outdoor use of processing aids in open systems Subsequent service life relevant for that use?: no	0