

DOW CORNING(R) 744 密封胶 白色

版本 1.6 修订日期: 2015/07/27 SDS编号: 758945-00007 前次修订日期: 2015/06/25
最初编制日期: 2014/11/26

1. 化学品及企业标识

产品名称 : DOW CORNING(R) 744 密封胶 白色

产品代码 : 000000000003321916

产品类别 : 硅酮弹性体

制造商或供应商信息

制造商或供应商名称 : 道康宁 (张家港) 投资有限公司

地址 : 中国江苏省张家港市扬子江国际化学工业园区北海路18号
邮编 : 215634

电话号码 : 400 880 7110

应急咨询电话 : (86 512) 56732049

电子邮件地址 : China.info@dowcorning.com

推荐用途和限制用途

推荐用途 : 粘接剂, 结合剂

2. 危险性概述

紧急情况概述

外观与性状 : 糊状物
颜色 : 白色
气味 : 无数据资料

非危险物质或混合物。

GHS危险性类别

非危险物质或混合物。

GHS标签要素

非危险物质或混合物。

防范说明 : **预防措施:**
P271 只能在室外或通风良好之处使用。

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物理和化学危险

根据现有信息无需进行分类。

健康危害

根据现有信息无需进行分类。

环境危害

根据现有信息无需进行分类。

GHS未包括的其他危害

未见报道。

3. 成分/组成信息

物质/混合物 : 混合物

危险组分

化学品名称	化学文摘登记号 (CAS No.)	浓度或浓度范围 (% w/w)
甲基三甲氧基硅烷	1185-55-3	>= 0.1 - < 1
八甲基环四硅氧烷	556-67-2	>= 0.1 - < 1

4. 急救措施

吸入 : 如吸入, 移至新鲜空气处。
如有症状, 就医。

皮肤接触 : 谨慎起见用水和肥皂清洗。
如有症状, 就医。

眼睛接触 : 谨慎起见用水冲洗眼睛。
如果刺激发生并持续, 就医。

食入 : 如吞咽: 不要引吐。
如有症状, 就医。
用水彻底漱口。

最重要的症状和健康影响 : 未见报道。

对保护施救者的忠告 : 对于急救员, 不需要特定的预防措施。

对医生的特别提示 : 对症辅助治疗。

5. 消防措施

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版本	修订日期:	SDS编号:	前次修订日期: 2015/06/25
1.6	2015/07/27	758945-00007	最初编制日期: 2014/11/26

- | | |
|-------------|---|
| 灭火方法及灭火剂 | : 水喷淋
耐醇泡沫
二氧化碳 (CO2)
化学干粉 |
| 不合适的灭火剂 | : 未见报道。 |
| 特别危险性 | : 接触燃烧产物可能会对健康有害。 |
| 有害燃烧产物 | : 碳氧化物
硅氧化物
甲醛
金属氧化物 |
| 特殊灭火方法 | : 根据当时情况和周围环境采用适合的灭火措施。
喷水冷却未打开的容器。
在安全的情况下, 移出未损坏的容器。
撤离现场。 |
| 消防人员的特殊保护装备 | : 如有必要, 佩戴自给式呼吸器进行消防作业。
使用个人防护装备。 |

6. 泄漏应急处理

- | | |
|------------------------|--|
| 人员防护措施、防护装备和应急处置程序 | : 遵循安全处置建议和个人防护装备建议。 |
| 环境保护措施 | : 避免排放到周围环境中。
如能确保安全, 可采取措施防止进一步的泄漏或溢出。
保留并处置受污染的洗涤水。
如果无法围堵严重的溢出, 应通报当地主管当局。 |
| 泄漏化学品的收容、清除方法及所使用的处置材料 | : 用惰性材料吸收。
对于大量溢漏来说, 进行围堵或采用其他恰当的防漏措施以免材料扩散。如果可以用泵抽排被围堵的材料, 则应将回收的材料存放在合适的容器中。
用适当的吸收剂清理残留的溢漏材料。
地方或国家法规可能适用于这种材料的释放和处置, 以及清理排放物时使用的材料和物品。您需要自行判定适用的法规。
本SDS的第13部分和第15部分给出了特定地方或国家要求的相关信息。 |

7. 操作处置与储存

操作处置

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技术措施 : 请参阅“接触控制/个体防护”部分的工程控制。
局部或全面通风 : 只能在足够通风的条件下使用。
安全处置注意事项 : 避免与皮肤长期或反复接触。
按照良好的工业卫生和安全规范进行操作。
小心防止溢出、浪费并尽量防止将其排放到环境中。
防止接触禁配物 : 氧化剂

储存

安全储存条件 : 存放在有适当标识的容器内。
按国家特定法规要求贮存。
禁配物 : 请勿与下列产品类型共同储存:
强氧化剂
包装材料 : 不适合的材料: 未见报道。

8. 接触控制和个体防护

危害组成及职业接触限值

成分	化学文摘登记号(CAS No.)	数值的类型(接触形式)	控制参数 / 容许浓度	依据
甲基三甲氧基硅烷	1185-55-3	TWA	50 ppm	DCC OEL
八甲基环四硅氧烷	556-67-2	TWA	10 ppm	DCC OEL

工程控制 : 加工可形成危险品化合物 (见第10节)。
确保足够的通风, 特别在封闭区域内。
尽可能降低工作场所的接触浓度。

个体防护装备

呼吸系统防护 : 一般来说无需个人呼吸防护设备。
眼面防护 : 穿戴下列个人防护装备:
安全眼镜
皮肤和身体防护 : 皮肤接触后要洗净。
手防护
备注 : 如长期的或重复的接触, 要戴防护手套。 休息前及工作结束时洗手。
卫生措施 : 确保洗眼器和安全淋浴器位于工作场所附近。

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1.6	2015/07/27	758945-00007	最初编制日期: 2014/11/26

使用时, 严禁饮食及吸烟。
沾染的衣服清洗后方可重新使用。
上述预防措施仅针对室温操作, 加热使用或气雾剂/喷雾应用
可能需要额外的预防措施。

9. 理化特性

外观与性状	: 糊状物
颜色	: 白色
气味	: 无数据资料
气味阈值	: 无数据资料
pH值	: 不适用
熔点/凝固点	: 无数据资料
初沸点和沸程	: 不适用
闪点	: > 100 ° C 方法: 闭杯
蒸发速率	: 不适用
易燃性(固体, 气体)	: 不属于易燃性危险物品
爆炸上限	: 无数据资料
爆炸下限	: 无数据资料
蒸气压	: 不适用
蒸气密度	: 无数据资料
密度/相对密度	: 1.39
溶解性	
水溶性	: 无数据资料
正辛醇/水分配系数	: 无数据资料
自燃温度	: 无数据资料
分解温度	: 无数据资料
黏度	

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动力黏度 : 不适用

爆炸特性 : 无爆炸性

氧化性 : 此物质或混合物不被分类为氧化剂。

分子量 : 无数据资料

10. 稳定性和反应性

反应性 : 未被分类为反应性危害。

稳定性 : 正常条件下稳定。

危险反应 : 在升温条件下使用, 可形成高危害性化合物(参见第10章)。
可与强氧化剂发生反应。
与水或湿空气接触生成甲醇。
在高温下, 会形成有害的分解产物。

应避免的条件 : 未见报道。

禁配物 : 氧化剂

危险的分解产物
热分解 : 甲醛

11. 毒理学信息

接触途径 : 皮肤接触
食入
眼睛接触

急性毒性

根据现有信息无需进行分类。

成分:

甲基三甲氧基硅烷:

急性经口毒性 : LD50 (大鼠): 12.3 ml/kg
评估: 此物质或混合物无急性口服毒性
备注: 信息来源于参考书和文献资料。

急性吸入毒性 : LC50 (大鼠): > 42.1 mg/l
暴露时间: 6 小时
测试环境: 蒸气
评估: 此物质或混合物无急性吸入毒性
备注: 根据测试数据

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版本 1.6 修订日期: 2015/07/27 SDS编号: 758945-00007 前次修订日期: 2015/06/25
最初编制日期: 2014/11/26

急性经皮毒性 : LD50 (家兔): > 9,500 mg/kg
评估: 此物质或混合物无急性皮肤毒性
备注: 根据测试数据

八甲基环四硅氧烷:
急性经口毒性 : LD50 (大鼠): > 4,800 mg/kg
评估: 此物质或混合物无急性口服毒性
备注: 根据测试数据

急性吸入毒性 : LC50 (大鼠): 2975 ppm
暴露时间: 4 小时
测试环境: 蒸气
评估: 此物质或混合物无急性吸入毒性
备注: 根据测试数据

急性经皮毒性 : LD50 (家兔): > 2.5 ml/kg
评估: 此物质或混合物无急性皮肤毒性
备注: 根据测试数据

皮肤腐蚀/刺激

根据现有信息无需进行分类。

成分:

甲基三甲氧基硅烷:

种属: 家兔
结果: 无皮肤刺激
备注: 根据测试数据

八甲基环四硅氧烷:

种属: 家兔
结果: 无皮肤刺激
备注: 根据测试数据

严重眼睛损伤/眼刺激

根据现有信息无需进行分类。

成分:

甲基三甲氧基硅烷:

种属: 家兔
结果: 无眼睛刺激
备注: 根据测试数据

八甲基环四硅氧烷:

种属: 家兔
结果: 无眼睛刺激
备注: 根据测试数据

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呼吸或皮肤过敏

皮肤过敏: 根据现有信息无需进行分类。

呼吸过敏: 根据现有信息无需进行分类。

成分:

甲基三甲氧基硅烷:

评估: 可能或者肯定对人类具有低到中等程度的的皮肤致敏率

测试类型: Buehler 豚鼠试验

种属: 豚鼠

备注: 根据测试数据

八甲基环四硅氧烷:

评估: 不引起皮肤过敏。

测试类型: 最大反应试验

种属: 豚鼠

备注: 根据测试数据

生殖细胞致突变性

根据现有信息无需进行分类。

成分:

甲基三甲氧基硅烷:

体外基因毒性

: 测试类型: 细菌回复突变试验 (AMES)
结果: 阴性
备注: 根据测试数据

: 测试类型: 致突变性 (体外哺乳动物细胞遗传试验)
结果: 阳性
备注: 根据测试数据

: 测试类型: 体外染色体畸变试验
结果: 阳性
备注: 根据测试数据

体内基因毒性

: 测试类型: 哺乳动物红细胞微核试验 (体内细胞遗传试验)
种属: 小鼠
染毒途径: 食入
结果: 阴性
备注: 根据测试数据

生殖细胞致突变性 - 评估

: 动物实验未见任何致突变影响。

八甲基环四硅氧烷:

体外基因毒性

: 测试类型: 细菌回复突变试验 (AMES)

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最初编制日期: 2014/11/26

结果: 阴性
备注: 根据测试数据

: 测试类型: 致突变性 (体外哺乳动物细胞遗传试验)
结果: 阴性
备注: 根据测试数据

: 测试类型: 体外染色体畸变试验
结果: 阴性
备注: 根据测试数据

: 测试类型: 体外哺乳动物细胞姊妹染色单体交换试验
结果: 阴性
备注: 根据测试数据

: 测试类型: 哺乳动物细胞 (体外) DNA 损伤和修复、程序外 DNA 合成
结果: 阴性
备注: 根据测试数据

体内基因毒性

: 测试类型: 哺乳动物红细胞微核试验 (体内细胞遗传试验)
种属: 大鼠
染毒途径: 吸入 (蒸气)
结果: 阴性
备注: 根据测试数据

测试类型: 啮齿类动物显性致死试验 (生殖细胞) (体内)
种属: 大鼠
染毒途径: 食入
结果: 阴性
备注: 根据测试数据

生殖细胞致突变性 - 评估

: 动物实验未见任何致突变影响。

致癌性

根据现有信息无需进行分类。

生殖毒性

根据现有信息无需进行分类。

成分:

甲基三甲氧基硅烷:

对繁殖性的影响

: 测试类型: 重复染毒毒性试验合并生殖/发育毒性筛选试验
种属: 大鼠, 雄性和雌性
染毒途径: 食入
症状: 对生育无影响。
备注: 根据测试数据

化学品安全技术说明书

按照GB/T 16483、GB/T 17519编制

DOW CORNING

DOW CORNING(R) 744 密封胶 白色

版本	修订日期:	SDS编号:	前次修订日期: 2015/06/25
1.6	2015/07/27	758945-00007	最初编制日期: 2014/11/26

对胎儿发育的影响 : 测试类型: 重复染毒毒性试验合并生殖/发育毒性筛选试验
种属: 大鼠, 雄性和雌性
染毒途径: 食入
症状: 对胎儿发育无影响。
备注: 根据测试数据

生殖毒性 - 评估 : 根据动物试验, 没有对性功能, 生殖或发育的不利影响。

八甲基环四硅氧烷:

对繁殖性的影响 : 测试类型: 两代繁殖毒性试验
种属: 大鼠, 雄性和雌性
染毒途径: 吸入 (蒸气)
症状: 对生育的影响。
备注: 根据测试数据

对胎儿发育的影响 : 测试类型: 孕期发育毒性试验 (致畸性)
种属: 家兔
染毒途径: 吸入 (蒸气)
症状: 对胎儿发育无影响。
备注: 根据测试数据

生殖毒性 - 评估 : 根据动物试验, 有一些对性功能和生殖的影响的证据。

特异性靶器官系统毒性- 一次接触

根据现有信息无需进行分类。

特异性靶器官系统毒性- 反复接触

根据现有信息无需进行分类。

成分:

甲基三甲氧基硅烷:

接触途径: 吸入 (蒸气)

评估: 在浓度为1 mg/1/6h/d或以下时, 未在动物身上观察到产生了明显的健康影响。

接触途径: 食入

评估: 在浓度为100 mg/kg体重或以下时, 未在动物身上观察到产生了明显的健康影响。

八甲基环四硅氧烷:

接触途径: 食入

评估: 在浓度为100 mg/kg体重或以下时, 未在动物身上观察到产生了明显的健康影响。

接触途径: 吸入 (蒸气)

评估: 在浓度为1 mg/1/6h/d或以下时, 未在动物身上观察到产生了明显的健康影响。

接触途径: 皮肤接触

评估: 在浓度为200 mg/kg体重或以下时, 未在动物身上观察到产生了明显的健康影响。

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最初编制日期: 2014/11/26

重复染毒毒性

成分:

甲基三甲氧基硅烷:

种属: 大鼠
染毒途径: 吸入 (蒸气)
备注: 根据测试数据

种属: 大鼠
染毒途径: 食入
备注: 根据测试数据

八甲基环四硅氧烷:

种属: 大鼠
染毒途径: 食入
备注: 根据测试数据

种属: 大鼠
染毒途径: 吸入 (蒸气)
备注: 根据测试数据

种属: 家兔
染毒途径: 皮肤接触
备注: 根据测试数据

吸入危害

根据现有信息无需进行分类。

进一步信息

成分:

八甲基环四硅氧烷:

备注: 为期2年的反复蒸气吸入研究发现, 大鼠反复吸入八甲基环四硅氧烷 (D4) 可影响雌性动物的子宫 (子宫良性腺瘤)。这一研究结果只出现在最高剂量 (700ppm) 使用的情况下。目前研究尚未表明, 这些影响是否可能出现在人类相关途径。大白鼠反复接触 D4, 导致肝脏内原卟啉积聚。缺乏原卟啉堆积的具体机制信息, 这些研究发现与人类相关性尚不清楚。

12. 生态学信息

生态毒性

成分:

甲基三甲氧基硅烷:

对鱼类的毒性 : LC50 (Oncorhynchus mykiss (虹鳟)): > 100 mg/l
暴露时间: 96 小时
方法: OECD测试导则203

DOW CORNING(R) 744 密封胶 白色

版本 1.6 修订日期: 2015/07/27 SDS编号: 758945-00007 前次修订日期: 2015/06/25
最初编制日期: 2014/11/26

对水蚤和其他水生无脊椎动物的毒性 : EC50 (Daphnia sp. (溞类)): > 100 mg/l
暴露时间: 48 小时
方法: OECD测试导则202

对藻类的毒性 : ErC50 (Pseudokirchneriella subcapitata (绿藻)): > 100 mg/l
暴露时间: 72 小时
方法: OECD测试导则201

细菌毒性 : EC50: > 100 mg/l
方法: OECD测试导则209

八甲基环四硅氧烷:

对鱼类的毒性 : LC50 (Oncorhynchus mykiss (虹鳟)): > 0.022 mg/l
暴露时间: 96 小时
备注: 在极限溶解浓度时无毒性

对水蚤和其他水生无脊椎动物的毒性 : EC50 (Daphnia sp. (溞类)): > 0.015 mg/l
暴露时间: 48 小时
备注: 在极限溶解浓度时无毒性

对藻类的毒性 : EC50: > 0.022 mg/l
暴露时间: 96 小时
备注: 在极限溶解浓度时无毒性

NOEC: 0.022 mg/l
暴露时间: 96 小时
备注: 在极限溶解浓度时无毒性

对鱼类的毒性 (慢性毒性) : NOEC (Oncorhynchus mykiss (虹鳟)): >= 0.0044 mg/l
备注: 在极限溶解浓度时无毒性

对水蚤和其他水生无脊椎动物的毒性 (慢性毒性) : NOEC (Daphnia magna (水蚤)): > 0.0079 mg/l
暴露时间: 21 天
备注: 在极限溶解浓度时无毒性

细菌毒性 : IC50: > 10,000 mg/l
方法: ISO 8192

生态毒理评估
慢性水生毒性 : 可能对水生生物造成长期持续有害影响。

持久性和降解性

成分:

甲基三甲氧基硅烷 : 水解半衰期: 2.2 小时 pH值: 7
水中的稳定性

DOW CORNING(R) 744 密封胶 白色

版本 1.6 修订日期: 2015/07/27 SDS编号: 758945-00007 前次修订日期: 2015/06/25
最初编制日期: 2014/11/26

八甲基环四硅氧烷:

生物降解性

: 结果: 不易快速生物降解的。
生物降解性: 3.7 %
暴露时间: 28 天
方法: OECD测试导则310

水中的稳定性

: 水解半衰期: 69.3 - 144 小时 (24.6 ° C) pH值: 7
方法: OECD测试导则111

潜在的生物累积性

成分:

甲基三甲氧基硅烷:

正辛醇/水分配系数

: log Pow: -2.36

八甲基环四硅氧烷:

正辛醇/水分配系数

: log Pow: 6.48 (25.1 ° C)

土壤中的迁移性

无数据资料

其他环境有害作用

成分:

八甲基环四硅氧烷:

PBT和vPvB的结果评价

: 备注: 八甲基环四硅氧烷 (D4) 符合当前欧盟REACH法规附件XIII中规定的持久性, 生物累积性和毒性化学物质 (PBT) 和高持久性和高生物累积性物质 (vPvB) 的判断标准。D4在加拿大被评估并被视为满足PiT标准。但是, D4的化学性质并不类似于已知的PBT物质/vPvB物质。大部分实地考察得来的科学证据表明, 水中和陆地上的食物链中不存在D4的生物放大作用。D4在空气中可以通过与大气中自然产生的羟基自由基发生作用而实现分解。任何空气中未能与羟基自由基发生反应的D4预期将不会从空气中进入水体、陆地或进入生物体内。

13. 废弃处置

处置方法

残余废弃物

: 按当地法规处理。

污染包装物

: 应将空容器送至许可的废弃物处理场所循环利用或处置。
如无另外要求: 按未使用产品处理。

DOW CORNING(R) 744 密封胶 白色

版本 1.6 修订日期: 2015/07/27 SDS编号: 758945-00007 前次修订日期: 2015/06/25
最初编制日期: 2014/11/26

14. 运输信息

国际法规

陆运 (UNRTDG)

不作为危险品管理

空运 (IATA-DGR)

不作为危险品管理

海运 (IMDG-Code)

不作为危险品管理

按《MARPOL73/78公约》附则II和IBC规则

不适用于供应的产品。

国内法规

GB 6944/12268

不作为危险品管理

15. 法规信息

适用法规

职业病防治法

产品成分在下面名录中的列名信息:

NZIoC	: 所有成分已列名或豁免。
REACH	: 所有成分已（预）注册或豁免。
AICS	: 所有成分已列名或豁免。
IECSC	: 所有成分已列名或豁免。
ENCS/ISHL	: 所有成分都在ENCS（现有化学物质和新化学物质）/ ISHL（工业安全和健康法）名录上列名或因受到豁免而未列入名录。
PICCS	: 所有成分已列名或豁免。
DSL	: 本产品中的所有成分符合CEPA 1999和NSNR的规定，且已在加拿大DSL名录上列名或豁免。
TSCA	: 该产品中的所有成分已在TSCA名录上列名或被豁免。
KECI	: 所有成分已列名、豁免或申报。
TCSI	: 所有成分已列名或豁免。

化学品安全技术说明书

按照GB/T 16483、GB/T 17519编制

DOW CORNING

DOW CORNING(R) 744 密封胶 白色

版本	修订日期:	SDS编号:	前次修订日期: 2015/06/25
1.6	2015/07/27	758945-00007	最初编制日期: 2014/11/26

16. 其他信息

进一步信息

参考文献 : 内部技术数据, 数据来源于原料 SDS、OECD eChem 门户网站搜索结果, 以及欧洲化学品管理局, <http://echa.europa.eu/>

文件左侧双垂直线: 表示对前一版本内容进行了修订。

日期格式 : 年/月/日

缩略语和首字母缩写

DCC OEL : 道康宁指南
DCC OEL / TWA : 时间加权平均值

(Q)SAR - (定量) 结构-活性关系; ANTT - 巴西国家陆路运输机构; ASTM - 美国材料实验协会; bw - 体重; CPR - 受管制产品法规; DIN - 德国标准化学会; ECx - 引起x%效应的浓度; ELx - 引起x%效应的负荷率; EmS - 应急措施; ErCx - 引起x%生长效应的浓度; ERG - 应急指南; GHS - 全球化学品统一分类和标签制度; IARC - 国际癌症研究机构; IATA - 国际航空运输协会; IBC - 国际散装运输危险化学品船舶构造和设备规则; IC50 - 半抑制浓度; ICAO - 国际民用航空组织; IMDG - 国际海运危险货物; IMO - 国际海事组织; ISO - 国际标准化组织; LC50 - 测试人群半数致死浓度; LD50 - 测试人群半数致死量 (半数致死量); MARPOL - 国际防止船舶造成污染公约; n. o. s. - 未另列明的; Nch - 智利认证; NO(A)EC - 无可见 (有害) 作用浓度; NO(A)EL - 无可见 (有害) 作用剂量; NOELR - 无可见作用负荷率; NOM - 墨西哥安全认证; NTP - 国家毒理学规划处; OECD - 经济合作与发展组织; OPPTS - 污染防治、杀虫剂和有毒物质办公室; PBT - 持久性、生物累积性和毒性的物质; REACH - 欧洲议会和理事会关于化学品的注册、评估、授权和限制法规 (EC) 1907/2006 号; SADT - 自加速分解温度; SDS - 安全技术说明书; TDG - 危险货物运输; UN - 联合国; UNRTDG - 联合国关于危险货物运输的建议书; vPvB - 高持久性和高生物累积性物质; WHMIS - 工作场所危险品信息系统; DSL - 加拿大国内化学物质名录; KECI - 韩国现有化学物质名录; TSCA - 美国有毒物质控制法; AICS - 澳大利亚化学物质名录; IECSC - 中国现有化学物质名录; ENCS - 日本现有和新化学物质名录; ISHL - 日本工业安全和健康法案; PICCS - 菲律宾化学品与化学物质名录; NZIoC - 新西兰化学物质名录; TCSI - 台湾既有化学物质清册; CMR - 致癌、致突变性或生殖毒性物质; GLP - 合格实验室规范

免责声明

据我们所知及确信, 本安全技术说明书 (SDS) 于发布之日提供的信息均准确无误。此信息只用作安全操作、使用、加工、存储、运输、处置和发布的指南, 不代表任何类型的保证书或质量说明书。除文本规定外, 此表提供的信息只与本 SDS 顶部确定的特定材料有关, 当 SDS 中的材料与任何其他材料混合使用或用于任何流程时, 此表的信息将无效。材料用户应审查在特定环境下所需使用的操作、使用、加工和存储方式相关的信息和建议, 包括用户最终产品 SDS 材料的适用性评估 (如适用)。

化学品安全技术说明书
按照GB/T 16483、GB/T 17519编制

DOW CORNING

DOW CORNING(R) 744 密封胶 白色

版本	修订日期:	SDS编号:	前次修订日期: 2015/06/25
1.6	2015/07/27	758945-00007	最初编制日期: 2014/11/26

CN / ZH

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12 Revision Date: 2017/03/22 SDS Number: 837096-00013 Date of last issue: 2017/03/09
Date of first issue: 2014/11/26

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DOW CORNING(R) 744 ADHESIVE SEALANT WHITE
Product code : 000000000003321916
Chemical nature : Silicone elastomer

Manufacturer or supplier's details

Company : Dow Corning (Zhangjiagang) Holding Company Limited
Address : **18 Beihai Road, Yangtze River International Chemical Industry Park, Zhangjiagang, Jiangsu Province, P.R.C., Postal Code: 215634**
Telephone : 400 880 7110
Emergency telephone number : **(86 512) 56732049**
E-mail address : **China.info@dowcorning.com**

Recommended use of the chemical and restrictions on use

Recommended use : Adhesive, binding agents

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance : paste
Colour : white
Odour : No data available

Not a hazardous substance or mixture.

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Precautionary statements : **Prevention:**
P271 Use only outdoors or in a well-ventilated area.

Physical and chemical hazards

Not classified based on available information.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12 Revision Date: 2017/03/22 SDS Number: 837096-00013 Date of last issue: 2017/03/09
Date of first issue: 2014/11/26

Health hazards

Not classified based on available information.

Environmental hazards

Not classified based on available information.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Methyltrimethoxysilane	1185-55-3	>= 0.1 -< 1
Octamethylcyclotetrasiloxane	556-67-2	>= 0.1 -< 1

4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

Notes to physician : Treat symptomatically and supportively.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
Metal oxides
Formaldehyde
Silicon oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12 Revision Date: 2017/03/22 SDS Number: 837096-00013 Date of last issue: 2017/03/09
Date of first issue: 2014/11/26

employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

7. HANDLING AND STORAGE

Handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not swallow.
Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
Handle in accordance with good industrial hygiene and safety practice.
Take care to prevent spills, waste and minimize release to the environment.
- Avoidance of contact : Oxidizing agents

Storage

- Conditions for safe storage : Keep in properly labelled containers.
Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
Strong oxidizing agents
- Packaging material : Unsuitable material: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Methyltrimethoxysilane	1185-55-3	TWA	7.5 ppm	DCC OEL
Octamethylcyclotetrasiloxane	556-67-2	TWA	10 ppm	US WEEL

- Engineering measures** : Processing may form hazardous compounds (see section 10).
Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

Personal protective equipment

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
- Filter type : Organic vapour type
- Eye/face protection : Wear the following personal protective equipment:
Safety glasses
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
- Hand protection
Material : Chemical-resistant gloves
- Remarks : For prolonged or repeated contact use protective gloves. Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : paste
- Colour : white
- Odour : No data available
- Odour Threshold : No data available
- pH : Not applicable
- Melting point/freezing point : No data available

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

Initial boiling point and boiling range	:	Not applicable
Flash point	:	> 100 °C Method: closed cup
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not classified as a flammability hazard
Self-ignition	:	The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	No data available
Relative density	:	1.39
Solubility(ies) Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
Particle size	:	No data available

10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
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SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12 Revision Date: 2017/03/22 SDS Number: 837096-00013 Date of last issue: 2017/03/09
Date of first issue: 2014/11/26

- Chemical stability : Stable under normal conditions.
- Possibility of hazardous reactions : Use at elevated temperatures may form highly hazardous compounds.
Can react with strong oxidizing agents.
Methyl alcohol is formed upon contact with water or humid air.
Hazardous decomposition products will be formed at elevated temperatures.
- Conditions to avoid : None known.
- Incompatible materials : Oxidizing agents

Hazardous decomposition products

Thermal decomposition : Formaldehyde

11. TOXICOLOGICAL INFORMATION

Exposure routes : Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Components:

Methyltrimethoxysilane:

Acute oral toxicity : LD50 (Rat): 12.3 ml/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Information taken from reference works and the literature.

Acute inhalation toxicity : LC50 (Rat): > 42.1 mg/l
Exposure time: 6 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: On basis of test data.

Acute dermal toxicity : LD50 (Rabbit): > 9,500 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: On basis of test data.

Octamethylcyclotetrasiloxane:

Acute oral toxicity : LD50 (Rat): > 4,800 mg/kg

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12 Revision Date: 2017/03/22 SDS Number: 837096-00013 Date of last issue: 2017/03/09
Date of first issue: 2014/11/26

Assessment: The substance or mixture has no acute oral toxicity

Remarks: On basis of test data.

Acute inhalation toxicity : LC50 (Rat): 2975 ppm
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: On basis of test data.

Acute dermal toxicity : LD50 (Rabbit): > 2.5 ml/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: On basis of test data.

Skin corrosion/irritation

Not classified based on available information.

Components:

Methyltrimethoxysilane:

Species: Rabbit
Result: No skin irritation
Remarks: On basis of test data.

Octamethylcyclotetrasiloxane:

Species: Rabbit
Result: No skin irritation
Remarks: On basis of test data.

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Methyltrimethoxysilane:

Species: Rabbit
Result: No eye irritation
Remarks: On basis of test data.

Octamethylcyclotetrasiloxane:

Species: Rabbit
Result: No eye irritation
Remarks: On basis of test data.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12 Revision Date: 2017/03/22 SDS Number: 837096-00013 Date of last issue: 2017/03/09
Date of first issue: 2014/11/26

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Methyltrimethoxysilane:

Assessment: Probability or evidence of low to moderate skin sensitisation rate in humans

Test Type: Buehler Test

Species: Guinea pig

Result: positive

Remarks: On basis of test data.

Octamethylcyclotetrasiloxane:

Assessment: Does not cause skin sensitisation.

Test Type: Maximisation Test

Species: Guinea pig

Result: negative

Remarks: On basis of test data.

Germ cell mutagenicity

Not classified based on available information.

Components:

Methyltrimethoxysilane:

- Genotoxicity in vitro :
- Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: On basis of test data.
 - Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Result: positive
Remarks: On basis of test data.
 - Test Type: Chromosome aberration test in vitro
Result: positive
Remarks: On basis of test data.
- Genotoxicity in vivo :
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: On basis of test data.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Octamethylcyclotetrasiloxane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: On basis of test data.

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Result: negative
Remarks: On basis of test data.

: Test Type: Chromosome aberration test in vitro
Result: negative
Remarks: On basis of test data.

: Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: negative
Remarks: On basis of test data.

: Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative
Remarks: On basis of test data.

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (vapour)
Result: negative
Remarks: On basis of test data.

Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: On basis of test data.

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

Methyltrimethoxysilane:

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

- Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on fertility
Remarks: On basis of test data.
- Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on foetal development
Remarks: On basis of test data.
- Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Octamethylcyclotetrasiloxane:

- Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat, male and female
Application Route: inhalation (vapour)
Symptoms: Effects on fertility
Remarks: On basis of test data.
- Effects on foetal development : Test Type: Prenatal development toxicity study (teratogenicity)
Species: Rabbit
Application Route: inhalation (vapour)
Symptoms: No effects on foetal development
Remarks: On basis of test data.
- Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Components:

Methyltrimethoxysilane:

Exposure routes: inhalation (vapour)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Exposure routes: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

Octamethylcyclotetrasiloxane:

Exposure routes: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Exposure routes: inhalation (vapour)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Exposure routes: Skin contact

Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

Repeated dose toxicity

Components:

Methyltrimethoxysilane:

Species: Rat

Application Route: inhalation (vapour)

Remarks: On basis of test data.

Species: Rat

Application Route: Ingestion

Remarks: On basis of test data.

Octamethylcyclotetrasiloxane:

Species: Rat

Application Route: Ingestion

Remarks: On basis of test data.

Species: Rat

Application Route: inhalation (vapour)

Remarks: On basis of test data.

Species: Rabbit

Application Route: Skin contact

Remarks: On basis of test data.

Aspiration toxicity

Not classified based on available information.

Further information

Components:

Octamethylcyclotetrasiloxane:

Remarks: Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Methyltrimethoxysilane:

- | | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 110 mg/l
Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia sp. (water flea)): > 122 mg/l
Exposure time: 48 h |
| Toxicity to algae | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 120 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201 |
| Toxicity to microorganisms | : | EC50: > 100 mg/l
Method: OECD Test Guideline 209 |

Octamethylcyclotetrasiloxane:

- | | | |
|--|---|---|
| Toxicity to fish | : | LC50 (Cyprinodon variegatus (sheepshead minnow)): > 0.0063 mg/l
Exposure time: 336 h
Remarks: No toxicity at the limit of solubility |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Mysidopsis bahia (opossum shrimp)): > 0.0091 mg/l
Exposure time: 96 h
Remarks: No toxicity at the limit of solubility |
| Toxicity to algae | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.022 mg/l
Exposure time: 72 h
Remarks: No toxicity at the limit of solubility |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Oncorhynchus mykiss (rainbow trout)): >= 0.0044 mg/l
Remarks: On basis of test data.
No toxicity at the limit of solubility |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): >= 0.0079 mg/l
Exposure time: 21 d
Remarks: On basis of test data.
No toxicity at the limit of solubility |

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12 Revision Date: 2017/03/22 SDS Number: 837096-00013 Date of last issue: 2017/03/09
Date of first issue: 2014/11/26

Ecotoxicology Assessment

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

Persistence and degradability

Components:

Octamethylcyclotetrasiloxane:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 3.7 %
Exposure time: 28 d
Method: OECD Test Guideline 310

Stability in water : Degradation half life: 69.3 - 144 h (24.6 °C) pH: 7
Method: OECD Test Guideline 111

Bioaccumulative potential

Components:

Methyltrimethoxysilane:

Partition coefficient: n-octanol/water : log Pow: -2.36

Octamethylcyclotetrasiloxane:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): 12,400

Partition coefficient: n-octanol/water : log Pow: 6.48 (25.1 °C)

Mobility in soil

No data available

Other adverse effects

Components:

Octamethylcyclotetrasiloxane:

Results of PBT and vPvB assessment : Remarks: Octamethylcyclotetrasiloxane (D4) meets the current REACh Annex XIII criteria for PBT and vPvB. In Canada, D4 has been assessed and deemed to meet the PiT criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : Dispose of in accordance with local regulations.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

GB 6944/12268

Not regulated as a dangerous good

15. REGULATORY INFORMATION

National regulatory information

Law on the Prevention and Control of Occupational Diseases

The components of this product are reported in the following inventories:

- NZIoC : All ingredients listed or exempt.
- AICS : All ingredients listed or exempt.
- IECSC : All ingredients listed or exempt.
- ENCS/ISHL : All components are listed on ENCS/ISHL or exempted from inventory listing.
- PICCS : All ingredients listed or exempt.
- DSL : All chemical substances in this product comply with the CEPA

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version 1.12	Revision Date: 2017/03/22	SDS Number: 837096-00013	Date of last issue: 2017/03/09 Date of first issue: 2014/11/26
-----------------	------------------------------	-----------------------------	---

1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

- REACH : For purchases from Dow Corning EU legal entities, all ingredients are currently pre/registered or exempt under REACH. Please refer to section 1 for recommended uses. For purchases from non-EU Dow Corning legal entities with the intention to export into EEA please contact your DC representative/local office.
- TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
- KECI : All ingredients listed, exempt or notified.
- TCSI : All ingredients listed or exempt.

16. OTHER INFORMATION

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : yyyy/mm/dd

Full text of other abbreviations

DCC OEL : Dow Corning Guide
US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)
DCC OEL / TWA : Time weighted average
US WEEL / TWA : Time weighted average

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dan-

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

DOW CORNING

DOW CORNING(R) 744 ADHESIVE SEALANT WHITE

Version	Revision Date:	SDS Number:	Date of last issue: 2017/03/09
1.12	2017/03/22	837096-00013	Date of first issue: 2014/11/26

gerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CN / EN



Dow Corning[®] **744 RTV Sealant**

FEATURES & BENEFITS

- Non-flowing
- Room temp cure
- High elongation for added stress relief
- No mixing required
- RT cure, no ovens required
- Faster in-line processing with optional heat acceleration
- Added reliability can result from lower cured stress

POTENTIAL USES

- Bonding large components such as batteries or capacitors to circuit boards

APPLICATION METHODS

- Automated or manual needle dispensing systems

One-part, white, non-flowing general purpose moisture cure adhesive

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Result
Extrusion Rate	g/min	184
Flow Rate - Slump	in	0.2
	cm	0.6
Tack-Free Time at 25°C	minutes	55
Specific Gravity (Cured)	-	1.42
Tensile Strength	psi	395
	MPa	2.7
	kg/cm ²	28
Elongation	%	590
Tensile Modulus	psi	70
	MPa	0.5
	kg/cm ²	5
Tear Strength (Die B)	ppi	30
	N/cm	20
Unprimed Adhesion - Lap Shear to Aluminum	psi	430
	MPa	3
	kg/cm ²	296
Durometer Shore A	-	37
Shelf Life at 25°C	months	12
UL Flammability Classification	NA	94-HB

DESCRIPTION

Dow Corning one-part moisture cure adhesives are generally cured at room temperature and in an environment of 30 to 80 percent relative humidity eliminating the need for curing ovens and the associated costs of energy and capital. Greater than 90 percent of full physical properties should be attained within 24 to 72 hours and varies according to product. Faster manufacturing throughput can be

achieved since the adhesive and component can be handled in much shorter times of about 10 to 120 minutes, depending on the adhesive selected and the amount applied. These adhesives are not typically used in highly confined spaces or where a deep section cure is required as they generally cure from the exposed surface inward at a rate of 0.25 inch per seven days. Cure progresses from the outer exposed surface and is

dependent on the moisture in the air. Working time is generally a few minutes to an hour for these products until a surface skin begins to form. Mild heat below 60°C (140°F) may be used to increase through-put by accelerating the cure. Dow Corning silicone adhesives retain their original physical and electrical properties over a broad range of operating conditions which enhance the reliability of and service life of electronic devices. The stable chemistry and versatile processing options of these adhesives offer benefits for a variety of electronics needs from increasing component safety and reliability, reducing total cost or increasing the performance envelope of devices or modules. Underwriters Laboratory (UL) 94 recognition is based on minimum thickness requirements. Please consult the UL Online Certifications Directory for the most accurate certification information.

PACKAGING

RTV Adhesives are typically packaged in 100 ml syringes and 330 ml cartridges, 1 kg tubs and pails (18 - 25 kg). In general, Dow Corning adhesives/sealants are supplied in nominal 0.45-, 3.6-, 18- and 200-kg (1-, 8-, 40- and 440-lb) containers, net weight. Not all products may be available in all packages and some additional packages, such as a bladder packs or tubes, may be available for certain package sizes.

USABLE LIFE AND STORAGE

For best results, Dow Corning RTV adhesives should be stored at or below the storage temperature listed on the product label. Special precautions must be taken to prevent moisture from contacting these materials. Containers should be kept tightly closed with head or air space minimized. Partially filled containers should be purged with dry air or other gases, such as nitrogen. Shelf life is indicated by the "Use Before" date found on the product label.

PREPARING SURFACES

All surfaces should be thoroughly cleaned and/or degreased with Dow Corning® brand OS Fluids, naphtha, mineral spirits, methyl ethyl ketone (MEK) or other suitable solvent. Solvents such as acetone or isopropyl alcohol (IPA) do not tend to remove oils well, and any oils remaining on the surface may interfere with adhesion. Light surface abrasion is recommended whenever possible, because it promotes good cleaning and increases the surface area for bonding. A final surface wipe with acetone or IPA is also useful. Some cleaning techniques may provide better results than others; users should determine the best techniques for their particular applications.

SUBSTRATE TESTING

Due to the wide variety of substrate types and differences in substrate surface conditions, general statements on adhesion and bond strength are impossible. To ensure maximum bond strength on a particular substrate, 100 percent cohesive failure of the adhesive in a lap shear or similar adhesive strength test is desired. This ensures compatibility of the adhesive with the substrate being considered. Also, this test can be used to determine minimum cure time or can detect the presence of surface contaminants such as mold release agents, oils, greases and oxide films.

ADHESION

Dow Corning silicone adhesives are specially formulated to provide unprimed adhesion to many reactive metals, ceramics and glass, as well as to selected laminates, resins and plastics. However, good adhesion cannot be expected on non-reactive metal substrates or non-reactive plastic surfaces such as Teflon®, polyethylene or polypropylene. Special surface treatments such as chemical etching or plasma treatment can sometimes provide a reactive surface and promote adhesion to these types of substrates. Dow Corning® brand Primers can be used to increase the chemical activity on difficult substrates. Poor adhesion may be

experienced on plastic or rubber substrates that are highly plasticized, because the mobile plasticizers act as release agents. Small-scale laboratory evaluation of all substrates is recommended before production trials are made.

USEFUL TEMPERATURE RANGES

For most uses, silicone elastomers should be operational over a temperature range of -45 to 200°C (-49 to 392°F) for long periods of time. However, at both the low- and high temperature ends of the spectrum, behavior of the materials and performance in particular applications can become more complex and require additional considerations. For low-temperature performance, thermal cycling to conditions such as -55°C (-67°F) may be possible, but performance should be verified for your parts or assemblies. Factors that may influence performance are configuration and stress sensitivity of components, cooling rates and hold times, and prior temperature history. At the high-temperature end, the durability of the cured silicone elastomer is time and temperature dependent. As expected, the higher the temperature, the shorter the time the material will remain useable.

SOLVENT EXPOSURE

When liquid or vapor solvent or fuel exposure can occur in an application, the silicone adhesive discussed in this brochure is intended only to survive splash or intermittent exposures. It is not suited for continuous solvent or fuel exposure. Testing should be done to confirm performance of the adhesives under these conditions.

HANDLING PRECAUTIONS PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR

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HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult your local Dow Corning representative.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

HOW CAN WE HELP YOU TODAY?

Tell us about your performance, design and manufacturing challenges. Let us put our silicon-based materials expertise, application knowledge and processing experience to work for you.

For more information about our materials and capabilities, visit **dowcorning.com**.

To discuss how we could work together to meet your specific needs, email **electronics@dowcorning.com** or go to **dowcorning.com/contactus** for a contact close to your location. Dow Corning has customer service teams, science and technology centers, application support teams, sales offices and manufacturing sites around the globe.

*We help you invent the future.*TM

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