

## Drug Facts

### MMCAT [Mephedrone]

#### **Which drugs is this briefing about?**

This briefing is about the chemical 2-methylamino-1-p-tolylpropan-1-one which is also referred to as 4-methylmethcathinone.

The drug has been named "mephedrone" in a lot of discussion boards, and by a lot of retailers. The chemical name is often shortened to MMCAT or 4-mmc.

Some retailers and the media have been calling it Miaow or Meow.

Other 'brand' or slang names includes 'Bubbles.' This is sometimes (but not always) a combination of Mephedrone and Methylone (see below).

In this briefing it will just be referred to as MMCAT

#### **Mephedrone? Any relation to Methadone?**

None at all; methadone is a synthetic opiate; MMCAT is a synthetic stimulant. The name mephedrone could also be confused with methedrine. Methedrine is the brand name for the stimulant methamphetamine. While both drugs are made by processing ephedrine, there are big differences in terms of effect and risk.

#### **Is MMCAT the same as methylone?**

No, though there is a fair bit of confusion about this. Methylone is 3,4-methylenedioxy-N-methylcathinone. It was, until 16th April 2010 also a legal high sometimes sold or used in combination with mephedrone.

Confusingly there is a less common drug called Methedrone (bk-PMeoMA, 4 meo methcathinone, 530-54-1) which is very similar but is reputedly more cocaine-esque than Mephedrone. But it doesn't seem to crop up as much in the UK at the moment.

#### **Where does MMCAT come from?**

A few sources suggest that MMCAT is processed from the African plant khat. Khat does contain the chemical cathinone and this could be used as a starting point for MMCAT production. However it is more likely that MMCAT is produced synthetically using ephedrine or pseudo-ephedrine as a starting point. While synthesis may be taking place in the UK, it is more likely that the bulk of production is taking place in China.

One suggested production method converts ephedrine in to methcathinone, and then in to MMCAT.

### **How long has it been around?**

MMCAT first cropped up in 2007 in a pill called Neodoves, manufactured by a company in Israel. The drug was made illegal in Israel on 2008. Discussion groups in the UK started to pick up on it during 2008 and it became a bigger and bigger subject of discussion. The 2009 festival season was the first year in the UK where MMCAT was both widely available and widely publicised. Availability and use has increased ever since. With increased media reporting interest in MMCAT continued to increase, culminating in it being added to the list of CDs on 16th April 2010.

### **What is the current legal status of MMCAT?**

Mephedrone is now a Class B drug. It was added to the list of Controlled Drugs in April 2010. A collection of other chemicals structurally related to Mephedrone were also made in to Controlled Drugs at the same time.

### **Is it really a plant food?**

No. Before April 2010 it was not controlled under the Misuse of Drugs Act 1971. But if it were sold for human consumption as a psychoactive substance, it would have fallen within the terms of the Medicine Act. This would have made it illegal to supply it without a licence. To get round this problem and to avoid risks of legal action if people became ill after consuming it, it was often labelled "Plant Food" and "Not for Human Consumption."

It was just a legal get-out. And now that it is a controlled drug such measures are no longer required.

### **What does MMCAT look like?**

MMCAT is supplied a crystalline powder. Early UK supplies tended to be a drier white, fluffy powder but a lot of present supplies are more crystalline. Colour is very variable, from white, through off white to yellow or brown. Crystals may have a damp consistency making the drug harder to divide in to lines.

Some MMCAT has a noticeable and unpleasant aroma - a mixture of crab/shrimp smell with a sweeter, coconut scent. A cross, perhaps between a glass of Malibu and a pot of anchovy paste.

There is argument as to whether this aroma is from a chemical used in manufacture, the smell of MMCAT degrading, or some contaminant. The only consensus seems to be that it is not pleasant and some people find it makes snorting MMCAT very difficult.

### **How pure is MMCAT?**

Prior to the prohibition, purity of 95% was widely claimed by retailers. With it being made a controlled drug, it is likely that purity levels will drop rapidly as remaining stocks are run-down.

**How much does MMCAT cost?**

Prior to the ban, it retailed for around £10/g. Costs are likely to go up as it becomes more scarce.

**What sort of doses do people use?**

A typical dose range would be between 75 and 200mg. Experienced users in some drug forums suggest that keeping doses below 250mg is probably sensible to reduce unwanted side-effects.

**How is it taken?**

It can be snorted or swallowed. Snorting hurts the nose and may taste unpleasant. Swallowing seems to hurt the stomach and again, there may be an unpleasant taste. It would typically be put in a capsule or wrapped in cigarette paper. It lasts longer than snorting but needs to be taken on an empty or near empty stomach as eating first seems to reduce the effects substantially. It will take longer to come on when swallowed.

A survey by Bluelight found slightly more people swallowing than snorting.

**How quickly does it work and how long does it last?**

Snorting comes on quickly and effects are usually felt within 15 minutes and peak within half an hour. Effects fade after around an hour. When swallowed it can last for two or three hours.

**What does it feel like?**

Everyone's subjective opinions are different but the overall impression is that MMCAT is like a cocaine version of MDMA (Ecstasy). User reports indicate some of the same "loved-up" feeling of MDMA - but not to the same extent, with the euphoria, reward and ego of cocaine - but again not to the same extent. Alongside all this, some significant stimulant effects including increased energy, restlessness, increased heart-rate and jaw-clenching.

Some people feel increased libido while using but others report reduced erectile function.

**What are the downsides?**

At this stage it is impossible to state with any great confidence the nature and level of risk with MMCAT. It's a new drug, it hasn't had the same long period of experimentation that most other drugs have so there may be risks that only become apparent over the next months and years. Everyone using MMCAT at the moment is taking part in a big, uncontrolled experiment. The problem with the experiment is that users can't be sure what they are taking, everyone is using different quantities, some people are mixing it with other drugs and patterns of use are very variable. However, some risks are becoming apparent.

- Heart/circulatory problems: MMCAT appears to cause significant vasoconstriction - where blood vessels in the body get narrower. This pushes up blood pressure and can reduce blood flow to parts of the body.
- Some users have reported coldness and numbness at extremities (hands/feet) suggesting reduced circulation. A small number of people have reported pallor and discoloration of knees, legs and feet, and blotches appearing on skin. This may be related to circulatory problems but the exact cause is not clear.
- MMCAT increases heart rate and blood pressure, putting increased strain on the heart. Some users have reported chest pains, palpitations, and irregular heart beats. There have been fatalities where MMCAT had been used prior to death.
- Convulsions: There have been a small number of reports of people having convulsions following administration of MMCAT.
- Mood/comedown: Some people have reported low mood, depression and irritability following use, especially extended periods of use.
- Nose damage: irritation to lining of nose, burning sensation in nose, nose bleeds, scabbing of inside of nose.

### **Mixing MMCAT**

As we don't currently know exactly how MMCAT works, it is difficult to say which combinations are more or less risky. But as a general set of pointers, the following risks may be present when mixing MMCAT:

MMCAT and Cocaine: this mixes two stimulants both of which cause significant vasoconstriction. They are both putting a significant extra strain on the heart. This combination increases the risks of anxiety, paranoia, panic, and the risks of convulsions and cardiac problems; almost certainly a risky combination.

MMCAT and Methylone: This is popular in some quarters but it's not easy to say how risky it is. Methylone is reputed to be more Ecstasy-like and serotonergic than MMCAT and by taking both, users are seeking a more E-like, less Cocaine-like high. However, this combination could be highly risky. Both drugs probably elevate serotonin, and at high levels, excessively high serotonin could cause unpleasant and at worse dangerous symptoms. Anyone considering such a combination should think very carefully about the risks and take far lower doses than they would of either drug on its own.

MMCAT and Ketamine: This is a fairly popular combination but needs to be treated with caution.

Part of the reason that people like this combination is that the ketamine (a) makes the experience more hallucinogenic and (b) buffers against the comedown from the MMCAT. But as Ketamine is an anaesthetic, there are risks of injury using this combination. Given the widespread popularity of Ketamine in the UK, it seems likely that this combination will become more widespread.

Mephedrone and cannabis: some users report that using strong cannabis with mephedrone increases anxiety. Others have reported that, rather than making a comedown easier it can increase anxiety and paranoia during the comedown

Mephedrone and alcohol: lots of mixed reports on this one. Some people find low levels of alcohol use with mephedrone pleasant. Others find it very unpleasant. The key risks seem to include increased dehydration and nausea, bad hangovers, significant amnesia. The additional risk is that the disinhibiting effect of alcohol will make it harder to moderate use of MMCAT increasing the risk of bingeing. Probably a combination best avoided.

### **So is MMCAT 'safe?'**

MMCAT is certainly not a 'safe' drug. As the number of users has sharply increased, so the number of stories about the risks has gone up.

With any new and relatively unknown substance there is a level of risk. However, the risks will almost certainly be greater where people use large doses, use for extended periods of time, combine MMCAT with other drugs especially other stimulants, or drugs that elevate serotonin or dopamine.

Unfortunately, given a new, relatively cheap and legal substance rather a lot of people were bingeing on it before it became illegal and so the number of casualties has gone up too.

But even when used with care and at moderate doses, some experienced users are reporting negative symptoms. From the early days when some users on (for example Drugs Forum) were interested in sourcing and trying MMCAT, the general thrust of the threads now is that there is a significant level of risk, it's not a great compound and that there are safer and less unpleasant compounds than MMCAT.

But the key message here has to be no, MMCAT is not safe and should be treated with great caution.

### **Is MMCAT addictive?**

This really depends on how you define "addictive." MMCAT certainly doesn't exhibit the same pattern of tolerance and withdrawal that (for example) opiates would cause. However a large number of experienced users describe it as being very easy to binge on. The initial euphoric high is relatively short-lived and a significant number of users report redosing after fifteen-twenty minutes. At these sort of levels, it would be easy for a user to get through a gram an hour - and people who have bought larger quantities have found themselves in big binges using for long periods of time.

So there is a growing anecdotal evidence base that MMCAT can be quite hard to manage, leading to people going through large quantities in short periods of time. So there should be a clear message to potential users: MMCAT can be very moreish - and users should have a management strategy to avoid excessive, expensive and damaging binges.

### **What are the implications of Mephedrone's Class B status?**

As a Class B drug, the maximum penalty for supply is 14 years, and the maximum penalty for possession is five years.

### **My mate is thinking about taking MMCAT; what should I say?**

They are better off not doing it at all; the risks are unknown and despite the claims of sellers we know little about the purity, effects, short and long term risks. A small number of people got very rich while a lot of young people are playing their roles as human guinea pigs.

- Don't use MMCAT if you have any of the following: history of depression, heart problems, high blood pressure, circulatory problems, are being treated with hypertensives or antidepressants.
- Don't mix with other substances; start with a low dose - under 100mg to start with. Don't exceed 250mg.
- Seek medical advice if you experience chest pains, prolonged numbness of extremities or discolouration of skin.
- Don't buy in large quantities; if you do don't have it all to hand. Hide some of it to reduce chances of bingeing. Try to space redosing - not using every twenty minutes, but space over longer periods of time.
- Swallow, don't snort. If snorting, don't share snorting tubes; it could spread germs and Hepatitis
- Don't use for extended periods in a single sitting; have long breaks for recovery - at least a couple of weeks, ideally longer. Maintain good diet and self care to help speed up recovery - don't lurch out and just get stoned.
- Drink water to help reduce dehydration; don't drink excessively;
- Be careful of retailers offering you the "new legal" alternative to MMCAT. There will be a lot of people trying to get ahead of the curve in selling the next big thing and the risks for the early adopters can be high.

## Where can I get more information:

**Drugs Forum** [[www.drugs-forum.com](http://www.drugs-forum.com)] has probably the best managed collection of user experiences and information about Mephedrone

**Bluelight** [[www.bluelight.ru](http://www.bluelight.ru)] has good information too

**Frank** [[www.talktofrank.com](http://www.talktofrank.com)] has some information about Mephedrone and it's good to see that the website is up to date

**Crew2000** [[www.crew2000.org.uk](http://www.crew2000.org.uk)] has a good briefing on Mephedrone

There is a lot of other information out there but some of it is not all it should be so always use a couple of different sources.

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